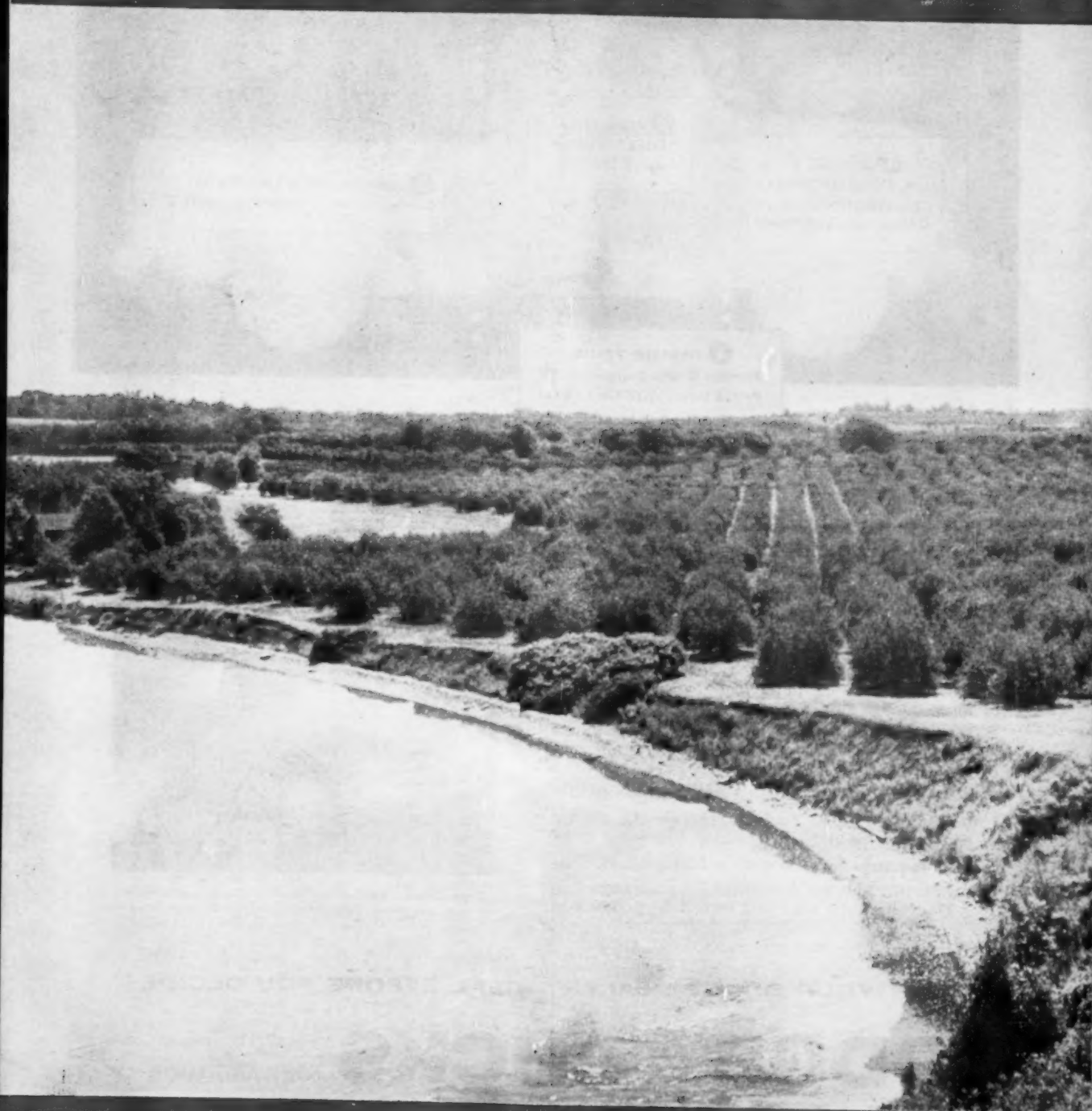


American Fruit Grower

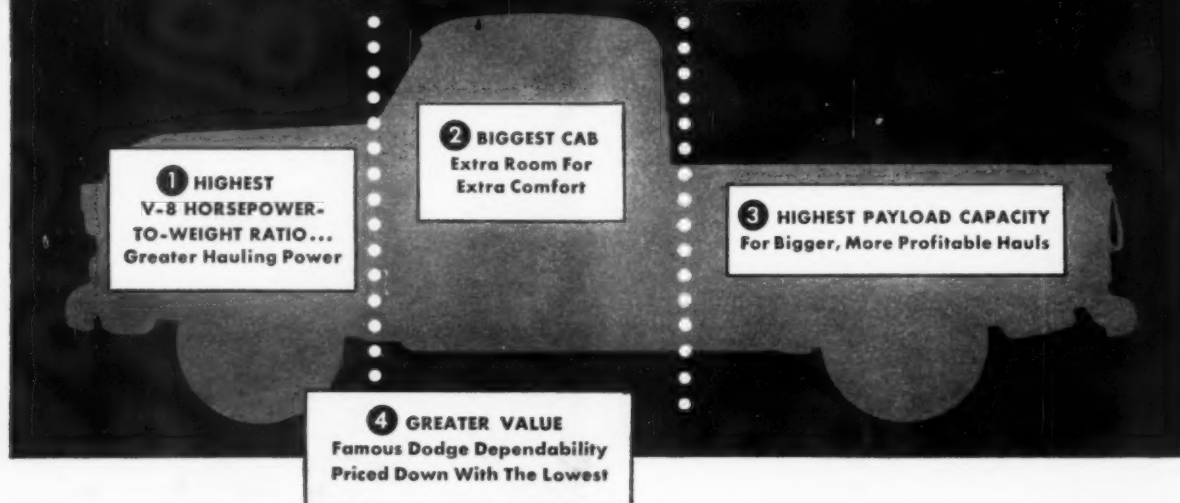
WESTERN EDITION

JUNE • 1956



• IRRIGATION ISSUE •

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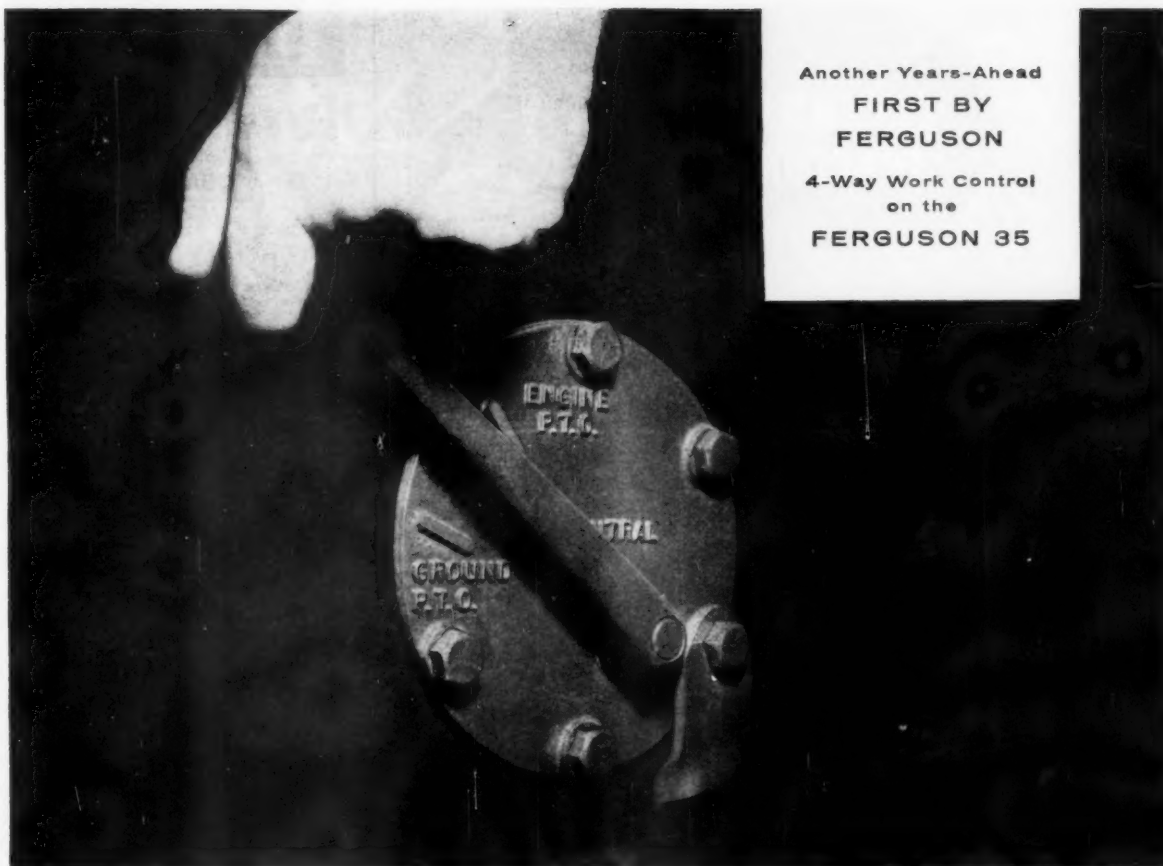


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WITH THE
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on the

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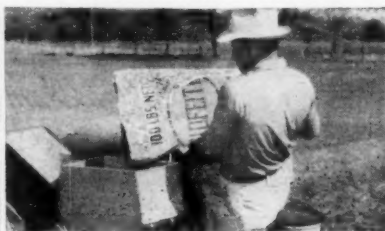
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American Fruit Grower

REG. U.S. PAT. OFF

The Only National Fruit Publication

Vol. 76 JUNE, 1956 No. 6

FEATURED IN THIS ISSUE

Cover photograph, by E. S. Phillips of New York State College of Agriculture, is of the Sodas Fruit Farm in Wayne County, New York. The body of water is Lake Ontario, a source of irrigation water for many orchards.

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AMERICAN FRUIT GROWER

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The excellent finish on Captan-sprayed fruit means top market quality — top profits. Apples are of excellent size and yields are very good — record-breaking in many cases.

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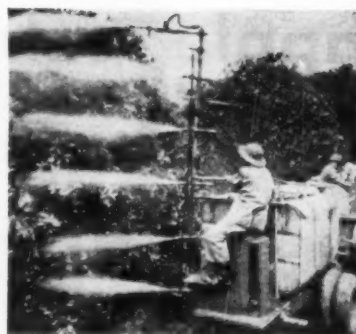


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LETTERS TO THE EDITOR

Who Has a Crosby Peach Tree?

Dear Editor:

We have been trying unsuccessfully for some time to locate a tree of the Crosby peach. This is an old variety that we think might have some possibilities in our peach breeding project.
South Haven, Mich. Stanley Johnston

The Crosby peach was introduced in 1876 in Massachusetts. Its chief virtue is its hardiness which caused it to be called at one time the "frost proof" peach. It was first known in northern Massachusetts as Excelsior and the name later was changed to Crosby because of another variety previously named Excelsior.

If you are growing this variety or know where a tree is located write direct to Stanley Johnston. He's one of our foremost peach breeders, having introduced such well-known varieties as Redhaven, Halehaven, and Fairhaven.—Ed.

Budding Trees

Dear Editor:

I don't think the question on budding is quite clear in your recent Question Box. Your reader asked, "Should the cambium wood just back of the bud be removed?" I think he meant the wood under the cambium layer after the bud is cut out. I always remove the wood, being careful not to remove the cambium layer. If the wood is left in, it often prevents the cambium layers from contacting.

Corydon, Iowa

Harry Hibbs

Quality or Condition

Dear Editor:

I am writing about the article by John A. Logan, "Thinking of Selling to the Chains?" He says "Uppermost in the mind of a chain supermarket buyer is . . . quality." In three other places he stresses quality. I wonder if what he means isn't condition.

In my limited experience I find that people buy on appearance. Quality is what makes an apple sour or sweet, dry or juicy, or just plain "yummy."

Excelsior, Minn.

T. S. Weir

New Walnut Variety

Dear Editor:

A new variety of walnut developed in C. E. "Ed" Sullivan's experimental grove at Yuba City, Calif., is an example of what's coming.

The Nugget walnut yields 46 pounds per tree at six years, 61 pounds per tree at seven years, and there is 53 per cent meats as compared to 42 per cent meats of the Hartley walnut. Official test was conducted by the California Walnut Growers Association. It went this way as far as size is concerned: 99 per cent large and 1 per cent medium compared to 67 per cent large, 24 per cent medium, and 9 per cent small for the Latin Franquette, most commonly planted in the California valleys.

"Ed" Sullivan says at seven years this new Nugget (he has two varieties of them) planted 20x20 would give 3 1/4 tons to the acre.

Mill Valley, Calif.

Neale Leslie

AMERICAN FRUIT GROWER

"polyethylene... increases the sales"

Printed polyethylene bags for Bosgraaf onions are supplied by **Central States Paper & Bag Co., Inc.**, St. Louis, Mo., from film extruded by **The Visking Corp.**, Terre Haute, Ind.



The polyethylene bag makes a better display in stores, and by that it increases the sales," testifies Ben Bosgraaf, marketer of celery, onions and carrots, Hudsonville, Mich.

"Buying 3 pounds of onions in this polyethylene bag is fine for the housewife. It is cleaner, and makes for easier storing. She sees the product she is buying, and, with 3 pounds at a time, there will be less waste."

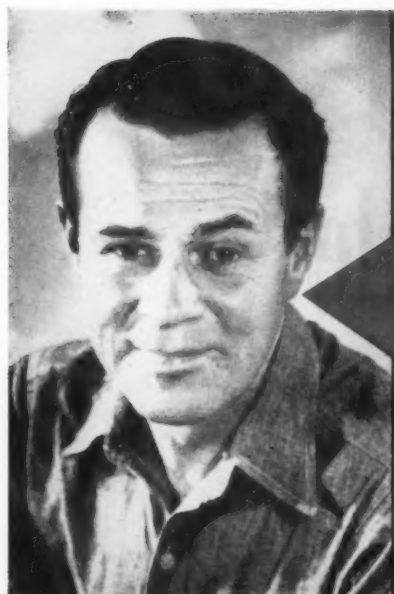
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Irrigation at work in the Hurd Orchards, Clintondale, N.Y., where 80 acres of apples and 2 acres of peaches are irrigated. System uses 1000 feet of aluminum pipe and 50 to 70 Rainbird 20A low-angle sprinklers delivering 8 gpm.

How Seven Successful Growers IRRIGATE Their Orchards

**Supplemental irrigation pays big dividends,
seven eastern and midwestern growers report**

By **ELDON S. BANTA**

THIS is a reporter's report on irrigation practices and experiences of seven top-notch orchardists in the East and Midwest. Maybe you will pick up some tips that will help make your irrigation more efficient, or maybe you will see a way to start irrigation in your orchard.

Henry Heisey, Greencastle, Pa.—

Henry and his father have been irrigating 180 acres of apples since 1946. They have plenty of water from a power dam and reservoir adjacent to the orchard. In only one of the first eight years did they not need to irrigate.

In one year watering increased the crop just enough to pay the operating and overhead costs. During four years irrigation was a definite benefit and made money in improved crops and yields. In two years it meant the difference between having a crop and not having one. Not only is size improved, but color and finish on irrigated apples are superior, especially in very dry years.

Cost-wise, Henry figures it out this way. Investment cost in equipment runs around \$100 per acre. He usually puts on three 4-inch applications a year on late varieties. For eight years he averaged 10 inches per

acre per year. His records told him that it cost \$2.60 to apply each acre-inch, or \$26 per acre per year.

Average yield was 800 bushels per acre per year. Compared to a non-irrigated orchard, this showed a 15% yield increase due to the supplemental water. If you figure this extra 100 bushels at \$2 per bushel his investment of \$26 per acre returned him \$200 per acre.

Irrigation improved the entire crop to the extent that it was worth 30 cents a bushel more than un-irrigated apples, or a total improvement worth \$240 per acre. The heavier crop made more propping necessary, which cost him \$25.98 per acre. So the cost of irrigation, plus the propping, plus a few other extra cost items, brought the entire cost of producing the extra 100 bushels to \$60.98. For this cost he realized a return of \$440, which is not bad interest. As Henry says, he can't afford not to irrigate.

Melvin Hurd, M. G. Hurd and Sons, Clintondale, N.Y.—Hurd Orchards in the lower Hudson Valley has been irrigating apples and peaches since 1932. But when Melvin installed a sprinkler system in 1953, an adequate supply of water became a problem.

They drilled three wells, but the

best only pumped 10 gallons per minute, a long way from the 500 or 1000 gpm needed. The stream and pond being used were not supplying enough water now.

In 1954, after failure of the wells, the Hurds enlarged their pond to hold a million gallons and diverted a spring into it. The pond then produced an estimated flow of 93,000 gallons per day. This was good, so they constructed a second pond holding 2 million gallons with a spring flow into it of around 70,000 gallons per day. Also, they have provided for directing the flow of a small brook close-by into the ponds when necessary. Now they have more assurance of enough water in dry times.

The Hurds' present equipment consists of a 500 gpm Hale pump on a surplus army pumper, 1000 feet of 5-inch, 2720 feet of 4-inch, and 900 feet of 3-inch aluminum pipe, all in 20-foot lengths. From 50 to 70 Rainbird 20A low-angle sprinklers are used at a time, each delivering 8 gpm at 35 pounds' pressure.

Over the past seven years they have put a total of \$7,874.41 into irrigation equipment, and irrigate 80 acres of apples and 2 of peaches with the present system. Water application is at the rate of 2 to 3 inches in

2 to 2½ hours, and from one to three times a season, depending upon the need.

Melvin says that irrigation on apples on the best Hudson Valley soils will seldom pay. He points to one block of McIntosh on good soil which in the drought year of 1954 produced over 50% of its crop 3 inches and larger without irrigation. On other orchards this was not the case. One of his nonirrigated orchards in 1954 produced 12.3 bushels per tree, while another which received water produced 14.5 per tree. The increase from irrigation is about 100 bushels per acre.

Clifford Toenniessen, Lockport, N.Y.—Cliff grows the best peaches in Niagara County, many people say. His 30 acres have averaged around



Left—Dr. B. J. Rogers, University of Maryland extension horticulturist, uses Irrigage (Rayturn Machine Corp.) to measure moisture in soil on nonirrigated Sunhigh peaches at Dillon Orchards.

Below—One of a series of six dams which furnish irrigation water for 185-acre block of peach trees at Dillon Orchards, Hancock, Md. Photo was taken in early spring, 1955, when dam was full of water and ready for summer use.



If you are now irrigating or are only thinking about it, the experiences of these seven successful growers can make you money!

400 bushels per acre during the past 10 years that he has been irrigating. Peach size has been predominantly 2½ inches and up, and he hasn't sold a bushel of good peaches for less than \$4. In almost every year since 1945 his irrigation system has added money to his peach, cherry, and apple crops.

Cliff gets his water from the Erie Barge Canal by either pumping directly from the canal, or by siphoning water into streams going through his farm and then pumping from them.

He uses a large Skinner sprinkler mounted on a stand to throw water over the trees. He likes the water on the trees and has never had any ill effects from it, such as sunburn or scald or brown rot. It takes about three hours to put on a 3-inch application with his 600 gpm Hale pump and Chrysler industrial motor.

His practice has been to start irrigating when the rainfall in June or July falls below 6 inches, which is about every year. His varieties include J. H. Hale, Hal-Berta, Burbank, and Fertile Hale. He has around \$7000 invested in equipment, but can water any part of his 200-acre farm.

C. G. Garman, Burt, N.Y.—Cam Garman started irrigating in 1954 by pumping water from Lake Ontario onto 40 acres of peaches and 35 acres of apples. From past experience he figures that two 3-inch applications on Elberta peaches boosted total yield by nearly 2500 bushels.



Pipe carrier used by Irvin Graves, Clarksville, Ark. A quarter-mile of 5-inch and 4-inch aluminum pipe, and another quarter-mile of 3-inch lateral pipe (Alcoa) are used to irrigate 20 acres of peaches. Trailer carries pipe from one location to another during irrigation.

His crop of 12,000 bushels of peaches was the largest-sized fruit he had ever grown. No peaches under 2 inches were packed, whereas the year before 10% of the crop, and in a previous dry year 25%, were under the 2-inch size.

Irvin Graves, Clarksville, Ark.—Irvin started irrigating 20 acres of peaches in 1951 from a large pond he built. By 1954 he had another constructed and in that very dry year saved his 60-acre peach crop. He picked and sold twice as many peaches per acre as other orchards around him.

With three men he can put up to 3 inches of water on 20 acres in 30 hours. Irvin says that to start with, a grower ought to consider investing at least \$5000 in irrigation equipment, but he adds, "In a year like 1954 you make this back with interest in one season."

C. E. Dutton, Milford Center, Ohio—Clarence says of irrigation, "It is definitely a must in our orchard, and in 21 out of the past 24 years we have needed and used irrigation."

In 1953 his orchards received only one soaking rain between May and



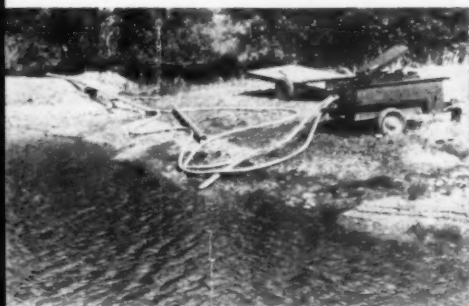
Irvin Graves supplies power for his 800 gpm Fairbanks-Morse irrigation pump from his McCormick-Deering tractor. Mounted pumping unit uses about 3 gallons of fuel an hour, is moved easily to new pond site.



Irrigating Montmorency cherries in Clifford Toennissen's orchard at Lockport, N.Y. He uses a large Skinner sprinkler mounted on a stand to throw water over the trees, delivers 400 gpm at 120 pounds' pressure at the pump (Hale powered by Chrysler industrial engine). It takes about three hours to put on a 3-inch application. Water is from Erie Barge Canal.



Three Rainbird sprinklers such as this are in use at Garmon Orchards, Burt, N.Y. Sprinklers have 7/8-inch openings, cover about an acre each. Garmon built cart on which sprinkler is mounted for easy moving. Pipe is uncoupled, sprinkler is laid down on cart, hauled to new location by a small tractor, and set up again.



Irrigation pump at Hurd Orchards, Clintondale, N.Y., consists of a surplus Army pumper with 500 gpm Hale pump attached. Fire hose is still used, but only to connect the pump to the 5-inch aluminum pipe. Trailer unit is easily moved.

irrigating a 185-acre block of peaches in 1955, they quickly learned the value of irrigation.

Says orchard manager J. Earl Wright, "Our plans are to have water available through ponds, rivers, and deep wells to irrigate our entire 3000 acres of apples, peaches, cherries, and plums within the next five years."

The heart of the irrigation system is a Marlow pump powered by a 180 h.p. General Motors industrial engine. Overhead sprinklers are spaced 60 feet apart, with risers 12 feet high.

Irrigation was started last year on July 19 on Sunhigh and Elberta peaches. Three inches of water at the rate of .4 inch per hour were applied on 90-foot strips across the orchard. To get 3 inches of water on the ground, each lateral was left for 7½ hours with a steady nozzle pressure of 50 pounds. Three settings were made a day. Since the orchard operates on a 24-hour day, two 4-man crews were used.

December. On apples he applied three 3-inch applications of water, while peaches got two waterings. Peaches respond especially well to water just as they begin to mature or ripen, and yields in 1953 proved the soundness of this. Apple size and yields were helped too. One 14-acre block picked 14,000 bushels, mostly 2¾ inches and up. The entire orchard produced very few apples under 2½ inches.

Dillon Orchards, Hancock, Md.—When big Dillon Orchards began

The second 3-inch application was started August 2. The need for water in the top 2 feet of soil was determined by the use of an Irrigage. This instrument (manufactured by Rayturn Machine Corp., 8200 S.E. 7th Ave., Portland 2, Ore.) gave the available moisture in the soil at 6-inch intervals down to a depth of 24 inches.

When the moisture level dropped to 60%, irrigation was started so that the orchard could be covered by the time the moisture level dropped to 25%.

Harvest of Sunhigh began on August 4 in the irrigated block and was completed by August 8. The nonirrigated block of Sunhigh matured seven days later and the harvest was more irregular. Elberta harvest started on August 16 and was completed August 25. Maturity on the nonirrigated Elbertas lagged behind four days. After the Sun-

IRRIGATION BULLETINS

Bulletins which will help you with your irrigation problems are available from many of the state extension services. For a comprehensive, up-to-date list of these bulletins, see page 24.

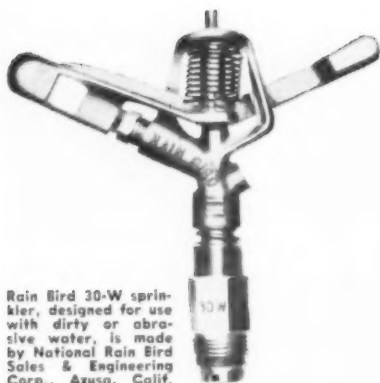
We suggest that you consult your home state extension service first; they know the particular climatic and water problems of your area. Also, because of short supply, many of these bulletins are available only to residents of the state.

high peaches were harvested a heavy rain greatly helped the nonirrigated Elbertas in the final swell.

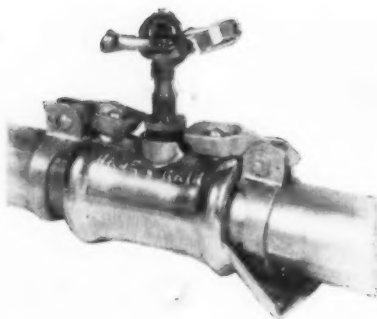
The increase in size on Sunhigh peaches was a little above 40% while on the Elbertas it ranged between 15% and 20%.

Some early varieties of peaches were also irrigated and they too made excellent growth and matured evenly.

"Here at Dillon Orchards," concludes Wright, "we know irrigation pays big dividends." THE END.



Rain Bird 30-W sprinkler, designed for use with dirty or abrasive water, is made by National Rain Bird Sales & Engineering Corp., Azusa, Calif.



Standard self-locking Wade Rain coupler, made by R. M. Wade & Co., 1919 N.W. Thurman St., Portland 9, Ore., adapts to all types of pipe.

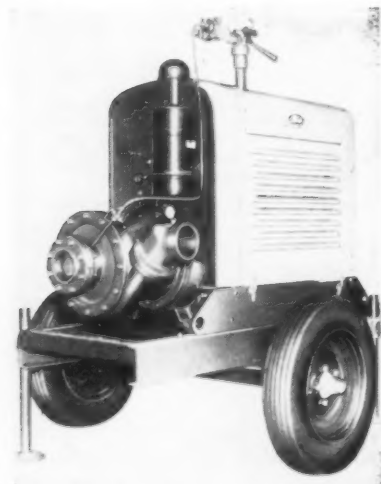


Skinner S-1000 sprinkler, made by Skinner Irrigation Co., 101 Water St., Troy, Ohio, comes in 7 nozzle sizes delivering from 10 up to 42.4 gpm.

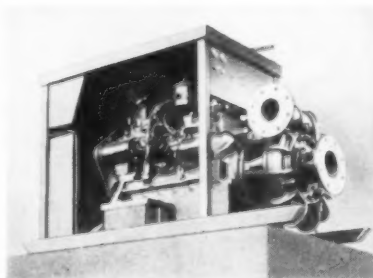
EQUIPMENT FOR *Your* IRRIGATION needs



Marlow pump powered by Chrysler IND-32A engine will handle 850 gpm at a pressure of 100 pounds per square inch. Marlow Pumps, Ridge-wood, N.J. Shown pumping water from a pond.



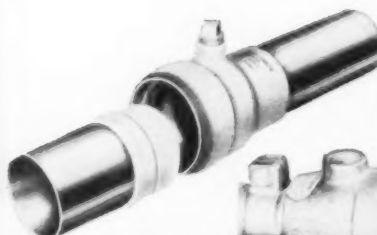
Carver Model 3WHI pump with 3-inch discharge delivers 500 gpm at 100 pounds pressure, is powered by Ford "226" 75 h.p. engine. Carver Pump Co., 1440 Hershey Ave., Muscatine, Iowa.



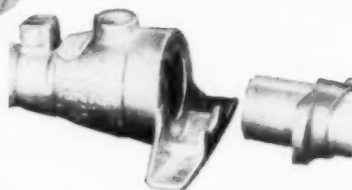
PFIR irrigation pump powered by 6-cylinder industrial engine is made by Hale Fire Pump Co., Conshohocken, Pa., delivers 800 gpm at 60 pounds pressure, is moderate in price, well-made.



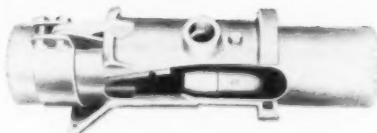
Gorman-Rupp pump is shown pumping water from pond. The Gorman-Rupp Co., 305 Bowman St., Mansfield, Ohio, makes 26 models in centrifugal pumps. Note large-capacity, drum-type fuel tank.



McDowell Mfg. Co., Pitts-burgh 9, Pa., makes coupling (left) featuring automatic, pressure-lock design.



Coupling (right) made by PORTable ALUMinum Irrigation Co., Box 878, Vista, Calif., features an easy, twist release.



Ireco coupler (right) has gasket seal to protect tubing ends. Irrigation Equipment Co., Inc., 409 E. 8th St., Eugene, Ore.



Flexible aluminum coupling is made by Champion Corp., 4739 Sheffield Ave., Hammond, Ind.

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that returns top profit

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FERTILIZER COMPOUND



You get season-long growth by top-dressing with "NuGreen." It releases nitrogen steadily, resists leaching, is held in the soil until needed.



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because practically every pound of "NuGreen" becomes plant food. See your dealer for "NuGreen" today.

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State NEWS

- Dreaded Medfly Returns to Plague Florida Growers
- Tennessee Growers Prevent Frost Damage by Irrigating

Combat Mediterranean Fruit Fly

FLORIDA—Representatives of Florida's agricultural industry, meeting in public hearing May 9 with state and federal officials, unanimously endorsed a proposed USDA federal quarantine against a newly-discovered infestation of the Mediterranean fruit fly in Florida.

The proposed quarantine would prevent the movement from infested areas and across state lines of any produce infested with the insect.

N. O. Berry, currently in charge of federal control and eradication efforts, reported that the pest, first found in a Miami suburb on April 13, is presently known to occur in a 20-square-mile area in Dade County in and around Miami, and in limited areas in Broward County near Fort Lauderdale and in and near Davie, a small community southwest of Fort Lauderdale.

Pointing out the wide range of fruits and vegetables this insect will attack and its mode of infestation (maggots, the larval stage of the fly, hatch and feed inside fruit from eggs that have been deposited there by the adult female fly), Berry said that in some areas of Africa and South America the pest made commercial fruit production difficult or impossible.

The federal-state eradication and control program that has been underway since the discovery of the pest involves the use of a sweetened malathion bait spray, a cleanup program to destroy all host fruit in the infested areas, and a trapping program to determine the extent of the infestation.

Ed L. Ayers, representing the Florida State Plant Board, emphasized that Florida has already imposed state regulations to prevent the spread of the pest from known infested areas. He stated that the board is "very much in favor of a federal quarantine" to strengthen the state program.

Ayers pointed out that the Dade County infestation straddles the Miami International Airport. He said that the insect was probably brought into the United States at this point, and appealed for more

SOUTHERN PEACH CROP PROSPECTS

The 1956 peach crop in the southern states (N.C., S.C., Ga., Ala., Miss., La., Ark., Okla., Texas) is estimated at 9,410,000 bushels. This is in sharp contrast to the 1955 crop which was almost a complete failure due to spring freeze damage.

Georgia's expected 1956 crop of 1,500,000 bushels is about 50% of a normal crop; South Carolina's 3,500,000 bushels, about normal; Arkansas' 1,950,000 bushels, the largest since 1949.

thorough inspection of incoming foreign baggage and products.

The Medfly was first found in Florida in April, 1929, and was eradicated in 18 months at an expenditure of \$7,500,000 and the use of 5,000 men by State Plant Board and USDA forces. It was found on over 1,000 properties in 20 counties at that time.

Winter Injury in Northwest

WASHINGTON—Immediately following the mid-November freeze, Northwest growers recognized that an accurate appraisal of the damage at that time was impossible. Attention then was given primarily to spur injury. Fruit spurs showed discoloration ranging from light brown to a very dark chocolate brown. In general it was slight in pears and in some apple varieties. The Rome Beauty, Jonathan, and Golden Delicious varieties were hit harder than Delicious and Winesap.

Opinions varied widely as to whether these injured spurs would produce fruit. It was not uncommon for crop estimates of an injured tree to vary from 2 or 3 boxes to almost a normal crop.

Subzero temperatures in early February caused further anxiety. Apple spurs that were of nearly normal color up to then showed discoloration soon thereafter.

As fruit spurs began to swell, however, many spurs in which the terminal bud was thought to have been injured beyond recovery did swell and bloom. In general, the bloom was much nearer normal than had been anticipated.

It is still too early to estimate the apple crop but as far as trees 15 years old or older are concerned, there is the possibility of producing a fair crop.

Along with the unseasonal subzero temperatures of the winter, there was a very heavy snowfall. In some areas only the very tops of young trees were exposed. As the snow began to melt, it became apparent that many trees between the ages of one and 15 years were injured. Trees between the ages of three and about eight seemed to be most vulnerable. Many of these trees are being repaired by grafting; others are being let stand; some are being replanted.

The extent of the damage cannot be determined at this time but it is certain there is serious injury to the tops of an appreciable number of young trees.—John C. Snyder, Ext. Hort. Specialist, State College of Washington.

Winter Injury in Idaho

IDAHO—The effects of the November winter injury are becoming more pronounced. Growers held off pruning severely injured trees and are keeping them irrigated. If the trees get through the hot weather this summer, they should make good recovery.

Growers are enthusiastic over a fair crop of Italian prunes and apples. The cherry crop is significantly reduced. The peach crop appears to be about 50% of normal. Elbertas were hurt more than the J. H. Hales. The pear crop is expected to be a little smaller than last year.—Anton S. Horn, Sec'y, Boise.

Helicopter Dusting

NEW HAMPSHIRE—Interest is high in the use of helicopters for application of apple scab fungicide. At present 300 to 350 acres have been contracted for helicopter dusting, and a commercial operator has stationed a helicopter in the Wilton-Hollis-Derry area for use exclusively as a scab



—Photos Courtesy Walla Walla (Wash.) Union-Bulletin

WINTER-KILLED TREES BROUGHT BACK TO LIFE

Springtime, 1956, in the Pacific Northwest saw probably the most extensive grafting program that has ever taken place in any orchard area. Hundreds of trees killed by the severe winter temperatures were sawed off down to live wood a few inches from the ground and scions grafted into the stumps. If the system works out as

hoped, the grafts will become bearing trees in six years. In photo 1, the blade of a grafting tool is driven into the stump of a parent apple tree which had been sawed down to live wood a few inches above the ground. In photo 2, the tool has been reversed and its wedge side driven into the split trunk. This forces an opening for the new

wood. One scion has been placed, and the other is on its way. When both scions are in place, wax is applied to the exposed surface (photo 3), filling up the cracks. An outer coating of protective material is then painted over the entire graft area, and the finished job is shown in photo 4.—C. C. Crowner.

AMERICAN FRUIT GROWER

duster. Dichlone and captan dusts are being used as the fungicide.

Cool, wet weather has delayed the fruit season somewhat. In orchards that were well-fertilized and sprayed last year, McIntosh bloom prospects are good. Trees that produced little growth last year show only a few blossom buds.—*E. J. Rasmussen, Sec'y, Durham.*

Build Irrigation Ponds

MARYLAND—Fruit growers are really building irrigation ponds, and it would be difficult to estimate the millions of gallons of water impounded or planned. As a rough estimate, there are almost 40 ponds either built or under construction by five growers in the Hancock area alone. These ponds were built under whatever federal and state water rights laws apply.—*A. F. Vierheller, Sec'y, College Park.*

Strawberry Promotion Plan Fails

OREGON—Plans for a voluntary assessment of growers and processors to finance a promotion program on frozen strawberries have been abandoned for this season by the Oregon-Washington Strawberry Council.

This decision was made by the council executive committee after a drive to obtain co-operation of strawberry processors failed to get sufficient participation, according to Marvin VanCleave, Salem grower and council president.

The minimum goal was to obtain agreements to participate from 20 processors representing 20,000 tons of strawberries. Processors were asked to agree to solicit \$1 a ton contribution from their growers, and match the amount put up by growers.

VanCleave said such agreements were obtained from nine Oregon processors whose combined 1955 pack had been 9840 tons. Two Washington processors with 343 tons also signed agreements.

These results, the council decided in mid-May, indicated insufficient industry support for a voluntary promotion program this year. Prospects for a smaller crop here, in the face of a big increase in California, were seen as a factor in the industry's attitude.—*Harold and Lillie Larsen.*

Modified Atmosphere Storage

NEW YORK—McIntosh from northern New York and the Hudson Valley stored in modified atmosphere storage are doing well in the market. Apple condition is generally good, although a few lots have scalded. According to work done this year by Dr. Robert Smock at Cornell University, this is apparently tied in with delay in cooling the apples down after harvest.

The use of diphenylamine on apples again proved to be very striking in scald control, particularly on Cortlands, Greenings, and Romes. Toxicological studies are badly needed.

Fruit crops are a good 10 days behind last year in bud development. Reports of light bud in some Greening orchards which were heavily budded last year and a more moderate McIntosh crop are being received. Weather has been quite wet, and orchards are deeply rutted.—*Daniel M. Dalrymple, Sec'y, Lockport.*

Irrigate for Frost Protection

TENNESSEE—Grower Schley Wilson, at Cosby in the foothills of the Smokies, has been experimenting with irrigation for several years. He has a small outfit, as his area is better-favored by rainfall than other parts of the state.

He stretched pipe along three rows of young Delicious trees just beginning to
(Continued on page 30)

Report scab control, superior finish resulting from

ORTHOCIDE

(captan)



Increased Fancy and No. 1 grade apples with an ORTHO Spray Program

MICHIGAN: Practically 100% scab control and superior finish of fruit resulted from an ORTHO Spray Program featuring ORTHOCIDE (captan) in 1955, reports Louis Klein & Sons, Sparta, Michigan, they sold McIntosh apples for \$2.50 per bushel tree run in spite of low market. The increased percentage of Fancy and No. 1 more than paid for ORTHOCIDE. Pictured: (left to right) ORTHO Fieldman Robert Mesecher, Floyd Klein, Sylvester Klein, Ray Swartz and Lenis Klein.

CONNECTICUT: "I raised the most beautiful peaches I ever saw, thanks to your ORTHO peach program (including ORTHOCIDE and VAPOPHOS)," says William Villa of Villa's Fruit Farm, Glastonbury, Connecticut. "I had fine keeping quality and no brown rot. The simplicity and effectiveness of the ORTHO program makes good peach raising an easy task."

**Here's why ORTHOCIDE (captan)
gives finer fruit finish, bigger yields, better
keeping qualities and outstanding disease control**

1. ORTHOCIDE is backed by ORTHO field research and serviced by trained ORTHO Fieldmen.
2. ORTHOCIDE is a top quality formulation of the chemical captan, made by the original developers and formulators of this fungicide.
3. Has better sticking, wetting and spreading agents and superior carrying agents.
4. ORTHOCIDE is compatible with ORTHO insect and disease control products and is specially designed and tailored to fit ORTHO programs.

For best results ORTHOCIDE should be used in a complete ORTHO spray program as recommended by our research department and ORTHO Fieldmen.



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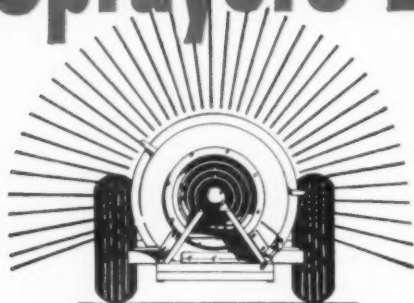
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ON ALL CHEMICALS. READ DIRECTIONS AND CAUTIONS BEFORE USE.

Myers Air-Blast



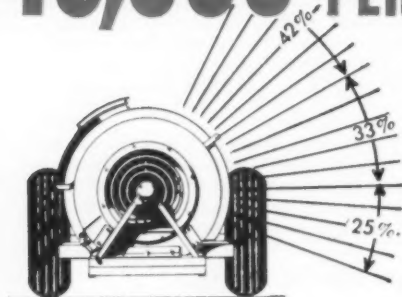
Myers newest air-blast orchard and grove sprayers deliver more high-velocity air than ever before . . . give growers better pest control under all kinds of conditions.

Sprayers Deliver



With tractor-mounted remote controls, the operator can easily direct air out both sides or one side at a time. Results: best spray coverage regardless of size or spacing of the tree or density of the foliage.

45,000 CUBIC FEET OF AIR PER MINUTE



When spraying from only one side, 42% of the air is directed at tree tops, 33% at center section and 25% at the lower areas.

For Cleaner Fruit

Myers air-blast orchard line includes:

CONCENTRATE MODELS

- 13- or 20-GPM high-pressure spray pumps, 400 PSI
- 32 ceramic-disc nozzles
- 300-, 400- or 500-gallon corrosive-resistant bonderized tanks
- 90 MPH air velocity

SEMI-CONCENTRATE AND DILUTE MODELS

- 120-GPM, special centrifugal pump, 90 PSI
- 40 stainless steel nozzles
- 300-, 400-, and 500-gallon bonderized tanks
- 90 MPH air velocity

See your nearby Myers sprayer dealer for a demonstration in your own orchard



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THE QUESTION BOX

Don't be perplexed! Send us your questions—no matter how big or small. A three-cent stamp will bring you an early reply. Address: The Question Box, AMERICAN FRUIT GROWER, Willoughby, Ohio.

PACKING PEACHES

What is the cost of packing peaches?—South Carolina.

A recent study of packing costs in South Carolina computing the $\frac{3}{4}$ and 1 bushel baskets gave the following figures: Labor, 16c for the $\frac{3}{4}$ bushel and 17c for the bushel basket; packing material, 45c and 47c; ice and power, 7c and 8c. Overhead items—such as depreciation, repairs, insurance, taxes, interest, and accounting service—added another 14c to the cost of packing the $\frac{3}{4}$ bushel basket and 15c for the bushel basket. Adding these up, the costs total 82c in the packing houses using the $\frac{3}{4}$ bushel and 87c in the packing houses using the bushel basket.

REPLANTS

On the subject of replants in old orchards and their failure to grow, what is the thinking among horticultural investigators today?—Georgia

This problem has baffled growers and research workers alike for many years. The answer seems to be a combination of factors among which a prominent one is soil nematodes. In some areas soil fumigation speeds the growth of replants. Following is a sensible discussion of the problem by A. N. Pratt, secretary, Tennessee State Horticultural Society.

"Here we have competition for both moisture and nutrients by the established trees nearby, probable residue of pests from the tree which was removed and competition with weeds and grasses. Until the replant tree has had time to extend its roots into the second and third foot of soil, competition with weeds and grasses, even lawn-depth grasses, seriously retards the growth of the replant tree. While many growers complain about the poor growth of replants, it is rare to find such trees with an ample area of clean-cultivated soil over the full root zone. Frequently we see only a bare spot of hard and cracked soil about the young tree, barely covering the area of nursery roots.

"Where sufficient labor is not available to keep the full area of competition—a circle with a radius of the tree's height—free of weeds and grass and hoed lightly to provide a soil mulch, treating the area with a good herbicide after the first hoeing in spring and applying a good straw or coarse hay mulch, would suffice for the season. Twenty pounds of 10 per cent gamma BHC in 100 gallons of water could be used at the rate of one gallon per tree or per 10 square feet, the usual area covered in cultivation of a replant.

AYRES PEAR

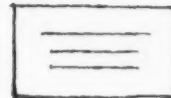
I would like to have some information on the Ayres pear. Also, is it resistant to fire blight?—Tennessee

The Ayres is, according to tests made up to this date, resistant to fire blight. The fruits are golden russet with a rose blush and are very attractive. The variety was first fruited in 1945 and has a good production record. The trees are good growers, spreading in growth. The flavor is sweet-subacid. Canning quality is average.

AMERICAN FRUIT GROWER



EXTRA



Crag Glyodin gives extra benefits Trade-Mark for Extra Apple Profits

Besides getting highest apple yields and best finish at lowest cost per 100 gallons of spray—use Crag Glyodin and get the extra benefits proved by agricultural experiment stations and thousands of growers.

Crag Glyodin EXTRA BENEFITS —

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Use the complete Glyodin-Mercury-Glyodin program

EARLY SPRAYS		COVER SPRAYS
GLYODIN for protection.	ADD MERCURY when needed for back action.	GLYODIN for continued protection.

Use "Crag" Glyodin to control cherry leaf spot too!



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Here are 117 modern fruit packing equipment plans, plus tips on layout planning that will help you tremendously in bringing your packing operations to top efficiency. This FREE 24-page booklet gives you authoritative information on apple, peach and tomato packing — data prepared by experts in this field from layouts that have been tested and proven in actual operation.



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These Growers Didn't
Worry About a

40-DAY DROUGHT

THE year 1955 will long be remembered in New York state as one of the driest experienced. No rain fell during the 40-day period, from mid-May until the last of June in the Penn Yan area.

Raspberry grower Joy Fullagar didn't sit idly by, however, and watch his 2½ acres of Dundee black raspberries dry up, as was the case with his neighbors' fields. But the big difference was that Joy had a pond from which to pump irrigation water and the other growers did not.

A pond in a ravine supplied enough water to put 150,000 gallons on Fullagar's 2½ acres. First application was made just after bloom, the second just as the berries started to turn red. He used Hardie equipment, employing seven 6 gpm sprinklers on 4-foot risers.

Diameter of a sprinkler area was 80 feet, watering 8 rows of berries at a time. He sprinkled for a 2½-hour period, waited six hours, then watered again, putting on a total of about 2 inches. It took 15 minutes to change the lateral pipe line from one row to another.

3000 Quarts Per Acre

Joy made five big pickings of large, juicy berries. Unirrigated fields in the area made two, sometimes three pickings of small, dry, tasteless berries. Joy believes water at the right time



Joy Fullagar in his irrigated Dundee black raspberry planting at Penn Yan, N.Y., at close of harvest. Water made heavy yields of berries in five pickings; plants grew to shoulder height.

AMERICAN FRUIT GROWER

last year doubled his yield of black raspberries over that of unirrigated fields. His yield was about 3000 quarts per acre.

Irrigation also paid well on Carlton Burt's Newburgh red raspberries, at Penn Yan. Carlton feels that if he could have installed his watering system sooner he would have had even better results.

Carlton used city water from a hydrant at the corner of his farm, so he has pretty accurate figures on the amount of water used as well as the cost. He applied 90,000 gallons on 1 acre in three 1-inch applications. The first went on July 2 and the next two followed at intervals of six to seven days. He picked 3000 quarts of beautiful berries. Without the water there would have been no berries!

Carlton irrigated 1 acre of grapes and 4 acres of peaches in addition to the raspberries. His consumption of city water totaled 885,000 gallons. After the first 50,000 gallons, the water cost was 21 cents per 1000 gallons, so the total cost came to only \$214.

Low Water Cost

For the raspberries the share was \$18.90, less than the price of two crates of berries. Interest and depreciation on equipment adds more cost, but the increased yields of fruits more than paid for the investment. The grapes received 100,000 gallons in two applications and the peaches 695,000 gallons in three applications.

Equipment on the Burt farm is of the Hardie make and consists of 1440 feet of 2-inch aluminum pipe in 30-foot lengths. Twelve No. 4 sprinklers were used last year, each delivering 5 gpm.



Fullagar in his neighbor's unirrigated raspberry field. Only two pickings were made, berries were poor, plant growth was stunted. Poor new canes mean a short crop during the following year.

JUNE, 1956

Stop
powdery
mildew...
with

KARATHANE WD



"We have used KARATHANE for two years and it now forms an important part of our spray schedule. The reason for this is that by controlling powdery mildew we have shown an increase in our yields of Romes by about 20%."—HARRY G. BLACK, Catoclin Mt. Orchards, Thurmont, Maryland.

No wonder leading apple growers are getting ready once more to spray KARATHANE WD for powdery mildew control. This organic fungicide is really effective against mildew, but unlike sulfur, does not harm buds, blossoms, fruit and foliage, when used as recommended.

KARATHANE should be included in pre-bloom sprays to help prevent the spread of overwintering mildew to the blossoms and to new growth. Post-bloom KARATHANE sprays reduce infection of the buds which produce *next year's* crop. One pound of KARATHANE powder per 100 gallons of spray does the trick. By adding 2 to 3 ounces of TRITON B-1956 spreader, you can assure thorough wetting and coverage of the "waxy" mildew.

KARATHANE also suppresses European red, Willamette, two-spotted, and Pacific and Bryobia mites. Under normal conditions, it is not necessary to add a miticide to KARATHANE sprays.

DITHANE FOR SUMMER DISEASES

You prevent loss from summer diseases when you use DITHANE Z-78 (zineb) in cover sprays. It controls Brooks spot, sooty blotch, bitter rot, Botryospheria rot, black rot, fly speck and secondary scab.



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Keeping Day-to-Day Irrigation Costs Down!

Important Factors To Consider Before Buying

LABOR COSTS • PUMPING COSTS • DEPRECIATION • SAFETY CONTROLS

First There Are Labor Costs

These may well be your highest single expense in the operation of an irrigation system. Plan your layout from the start for efficient pipe handling to keep this cost to a minimum. Check your layout carefully before you buy a system. It takes time to move pipe. A small amount of time saved on each move, when multiplied by the number of moves per season, can make a big difference in your earnings. As you consider different systems, ask yourself "Which layout does the best overall job with the least amount of labor?" Let your Marlow dealer help answer this question. He can offer you the experience of planning hundreds of irrigation systems, many of which will have been for land similar to yours.

Then There Are Pumping Costs

You must consider the direct cost of gasoline, diesel oil, LP gas, natural gas, or electricity which varies widely,



Lay out your sprinkler irrigation system for minimum pipe handling and you reduce your labor costs.



In planning your flood irrigation system, minimize your labor requirements by careful layout of main ditches.

as you know. Find out the cost per horsepower for each of these in your area . . . and make sure that your pump is driven by the cheapest. Perhaps you

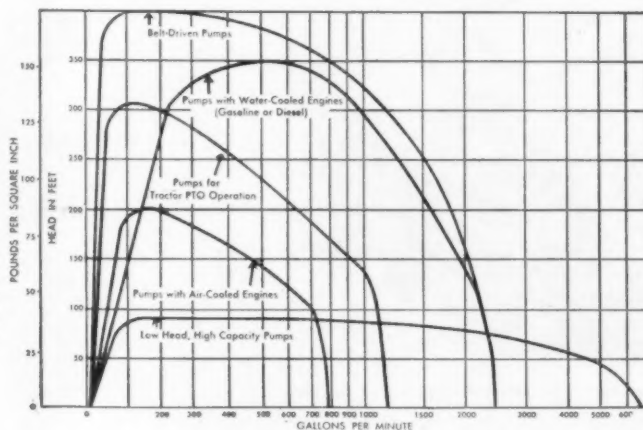
can use a power-take-off on equipment you already have.

Even after you start pumping, the cost of moving water to the roots of whatever you grow can vary greatly. If your pump is not efficient or is not properly used, most of your power dollar will never splash on a plant. On the other hand, a good pump . . . properly matched to your system . . . will let your crops soak up most of your power dollar.

Frankly, the effectiveness of a pump depends on (1) quality of design and (2) on where in its operating range it is used. Of course, your pump must be run at the point where it delivers the right capacity and pressure to your system. Therefore, you must make sure that you have a pump that is using your cheapest power and is operating at or near maximum efficiency when it is delivering the capacity and pressure your system needs.

To make sure that all your power dollars are turned to water, Marlow

The various lines of standard Marlow pumps cover these ranges of pressure and capacities under reasonable continuous duty operating conditions.



AMERICAN FRUIT GROWER

offers the widest choice of irrigation pump types and sizes available anywhere. From this broad selection you can be sure that your Marlow dealer can offer you one or more models which will operate your system competently ...while operating with maximum economy.

Depreciation Is Important Too

Handle your pipe, sprinklers, and couplings gently, keep them clean, and they will last almost indefinitely. However, keeping a pump and its power unit clean and lubricated is *not* enough. If the power unit must be overloaded or oversped to deliver the capacity and pressure your system needs, it will rapidly depreciate with many unnecessary repair bills and much lost time from irrigation.

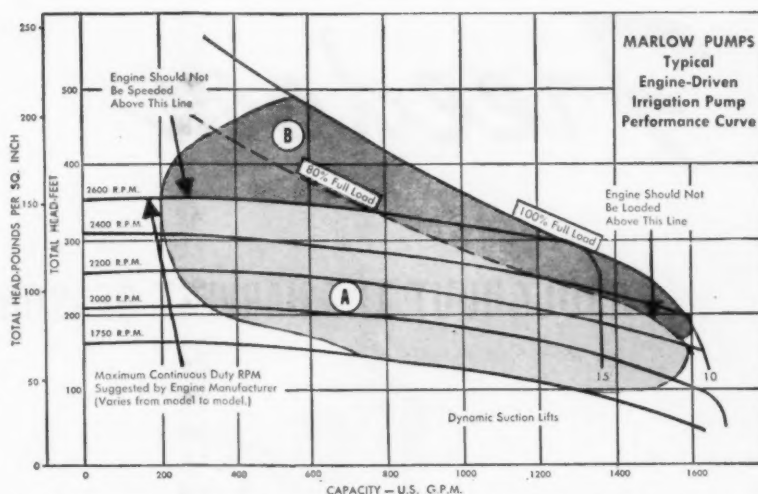
Make sure that the power unit of your irrigation pump is operating under a reasonable load, when the pump is delivering the performance your system needs. It should operate at no more than 80% of maximum engine capacity, and its speed should not exceed the manufacturer's recommendation for continuous duty operation.

Every engine-powered Marlow pump is mounted on a power unit which has ample power to operate the pump at rated capacity without overloading or overspeeding. We strongly recommend that no pump be selected for a system when its power unit must be run under a heavier load than suggested above. Instead, we suggest a larger pump and power unit.

In this way, when you buy a pump you buy a power reserve that will insure you of moderate depreciation with many years of satisfactory operation.

Finally, Make Sure That Operation Is Easy

Before you buy, think about operating your system. This can be simple, or it can be the source of many irritating interruptions. When operating, only one part of the system will require attention. That is the pump. Like any piece of power equipment, it requires fuel, lubrication, regulation, and supervision. If it is provided with the proper fittings and controls, operation will be automatic with no attention on your part. In the table on the right is a list of equipment which will make operation easy. The safety controls regulate and protect your investment. They make it possible to operate your pump unattended. Safety controls are the cheapest and best insurance you can have on an irrigation pump. High engine temperatures, low oil pressures, or water failure can damage your power unit extensively. All but the smallest Marlow pumps are guarded against each of these with appropriate safety devices ... at no extra cost.



(A) If your system operates at pressures and capacities in this area, your power unit will have ample capacity to perform without overloading or overspeeding. Under these conditions, your pump and power unit will run easily with years of satisfactory service.

(B) If your irrigation system operates at a pressure and capacity which fall in this area, you will be drawing on the power unit's reserve right from the beginning. Much faster depreciation will be the result. You should have a larger pump and power unit.

MARLOW ENGINE-DRIVEN IRRIGATION PUMP LINE Equipment Supplied On "Standard" Units

PUMP DISCHG. SIZE	1 1/2", 2"	2", 3"	3", 4"	4"	4", 6"	6"
ENGINE MAKE	Briggs & Stratton	Wisconsin	Willys	Chrysler	GM Diesel	
FEATURES						
Standard Construction	—	YES	YES	YES	YES	YES
Priming Mechanism	—	YES	YES	YES	YES	YES
Discharge Check Valve	—	YES	YES	YES	YES	YES
Threaded Suction & Disch.	YES	YES	YES	YES	YES	YES
Strainer Supplied	—	YES	YES	YES	YES	YES
Race Mt. or Wheel Mt.	YES	YES	YES	YES	YES	YES
Skid Mt. Available	—	—	YES	YES	YES	YES
Starting Method	ROPE	ROPE	CRANK*	ELECTRIC	ELECTRIC	ELECTRIC
Fuel Tank Supply	YES	YES	YES	YES	YES	—
Std. Safety & Control Devices						
Pressure Gauge	—	YES	YES	YES	YES	YES
Water Failure Cut-out Switch	—	YES	YES	YES	YES	**
High Head Temperature Cut-out Switch	—	—	YES	NOT NEEDED	NOT NEEDED	NOT NEEDED
High Water Temperature Cut-out Switch	NOT NEEDED	NOT NEEDED	NOT NEEDED	YES	YES	YES
Low Oil Pressure Cut-out Switch	***	***	YES	YES	YES	YES

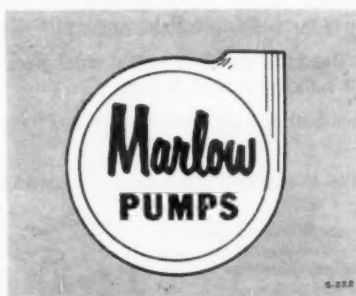
*ELECTRIC START IS AVAILABLE AT EXTRA COST.

**AVAILABLE AT EXTRA COST.

***NOT POSSIBLE WITH B. & S. ENGINES.

This chart shows the accessories and controls supplied as "standard equipment" with Marlow pumping units. Make sure that your pump

is fully equipped. If it is, both installation and operation will be simplified.



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He is an irrigation specialist who can help you produce better crops at a better profit. Upon request we will be glad to forward literature on Marlow pumps. As the leading manufacturer of sprinkler irrigation pumps, Marlow offers an exceptionally broad line. Pumps are available in many different types. This includes: gasoline, diesel or LPG engine powered pumps, electric motor driven units, pumps for belt drive from any auxiliary power source, and models designed particularly for connection to your tractor. Your Marlow dealer can select the exact pump for your specific needs. See him today.

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Rapid, effective action • Within one hour following application, **Actispray** should destroy all contacted leafspot infections.



Easy to use • Add readily-soluble **Actispray** antibiotic tablets directly to the tank with agitator running.

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Actispray is also recommended for non-bearing trees, nursery stock, and transplanted trees one-to-two years old.

Actispray antibiotic tablets are supplied in convenient glass tubes, 24 tablets to a package.

Recommendations for Actispray have been broadened recently to include its use for Cherry Powdery Mildew and Cedar Apple Rust on cedars. Details available on request.

Actispray is a product of The Upjohn Company and is distributed by

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WATCH OUT FOR SIX-SHOOTERS!

The smart grower checks into his water rights **BEFORE** he irrigates

SQUABBLES over water rights have led to more deaths by six-shooters in the West than have cattle rustling and armed robberies.

The more valuable water becomes, the more conflicts arise over the legal use of that water. By 1955 only the 17 western states had adopted comprehensive legislation for conserving the water in surface streams, and 14 states, mostly in the West, had legislation covering the use of ground water.

In the East, where irrigation is on the upswing, some states have adopted preliminary legislation on water rights, but many states have no legislation of this type as yet.

Use of Surface Streams

In the East the doctrine of "riparian rights" has been continuously applied to the use of surface water. Under this doctrine the owner of land through which or past which a surface stream flows has a right to have the stream flow past his property "undiminished in quantity or unimpaired in quality."

This doctrine has been modified to permit each riparian owner to make a "reasonable" use of the water. The courts have defined domestic use of the water in the household, watering livestock, and in some cases, watering lawns or small gardens, as reasonable use.

The right of a riparian owner to use water from a surface stream for irrigation is vague. The amount that could be used would depend on the "reasonableness" of the use.

The size and velocity of the stream would be a big factor in determining this. If the stream were large enough so that pumping for irrigation would not measurably reduce the size of the stream, downstream riparian owners would not be likely to object.

Dams and Wells

A "safe," but limited source of water for irrigation is a dam which collects water running over from the ground following rains or melting snow. The consensus is that a landowner is entitled to collect and impound all the diffused surface water on his land that he desires.

In an area where a well can supply a large quantity of water, such a source of irrigation water seems to present the least legal difficulties over water rights. The End.

Shredding grape vine prunings with International 300 Utility owned by Capistrano Winery and Vineyard Co., Fountain, Cal.



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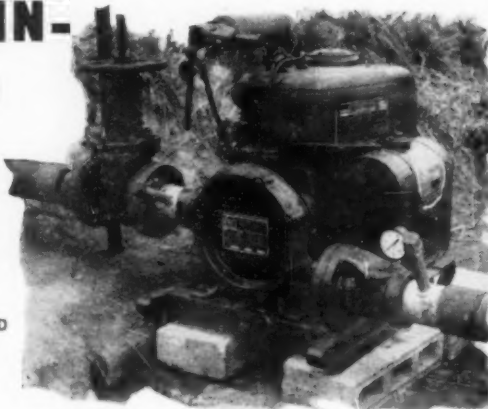
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Because many of these bulletins are printed in limited numbers, readers are asked to contact their home state's extension service first. Also, recommendations frequently vary from state to state according to local conditions.

Alabama

Water Resources and Supplementary Irrigation Workshop.
Extension Service, Alabama Polytechnic Institute, Auburn.

Arizona

Report No. 106—Suggested Construction Methods and Specifications for Concrete-Lined Farm Irrigation Ditches.
Circular 127—Fitting Cropping Systems to Water Supplies in Central Arizona.
Circular 205—Water Management.
General Bulletin No. 246—The Cost of Pumping Irrigation Water, Pinal County, 1951.
General Bulletin No. 250—Sprinkler Irrigation.
Director, Arizona Agricultural Experiment Station, Tucson.

California

Leaf No. 50—Avocado Irrigation.
B 728—Irrigation Experiments with Grapes.
C 404—Irrigation Wells and Well Drilling.
C 408—The Border Method of Irrigation.
C 415—Irrigation Pumps, Their Selection and Use.
C 418—Concrete Pipe for Irrigation.
C 438—Grading Land for Surface Irrigation.
C 440—Contour Planting and Irrigation on Moderate to Steep Slopes.
X 50—Essentials of Irrigation and Cultivation of Orchards.
X 73—The Contour Check Method of Orchard Irrigation.
X 158—Control of Aquatic and Ditchbank Weeds.
X 177—Irrigation Methods to Conserve Soil and Water on Steep Lands.
Agricultural Publications, Room 22, Giannini Hall, University of California, Berkeley 4.

Florida

Bulletin No. 378—Water Control in the Peat and Muck Soils of the Florida Everglades.
Bulletin No. 480—The Chemical Composition of Irrigation Water Used in Florida Citrus Groves.
Bulletin 526—Soil Moisture Relations in the Coastal Citrus Areas of Florida.
Bulletin No. 565—Tests of Low Head, High Volume Farm Pumps.
University of Florida, Agricultural Experiment Station, Gainesville.

Georgia

Producing Strawberries Under Irrigation.
Designing Sprinkler Irrigation Systems.
Georgia's Progress in Irrigation.
Irrigate for More Profits.
Irrigation Research in the Southern States.
Agricultural Extension Service, University of Georgia, Athens.

Indiana

No. ID-6—A Guide for Designing Sprinkler Irrigation Systems.
Agricultural Publications Office, Room 205, AES Bldg., Purdue University, Lafayette.

Kentucky

Extension Circular 528—Irrigation in Kentucky.
Bulletin Office, Agricultural Experiment Station, University of Kentucky, Lexington.

Louisiana

Bulletin No. 1180—Irrigation on Louisiana Farms.
Available at any County Agent's office or at Louisiana State University, Dept. of Agricultural Extension, Baton Rouge.

Maryland

Fact Sheet 71—Irrigation in Maryland.
Extension Service, University of Maryland, College Park.

Massachusetts

Extension Leaflet—Irrigation for Massachusetts Farms.
Extension Service, University of Massachusetts, Amherst.

Michigan

Bulletin No. 324—Fertilizing Through Irrigation Water.
Bulletin No. 327—Frost Protection with Sprinkler Irrigation.
Supplemental Irrigation in Michigan.
Co-operative Extension Service, Michigan State University, East Lansing.

Mississippi

Cut Irrigation Costs.^b
Mississippi Agricultural Extension Service,
State College.

New Jersey

Guide for Design and Operation of Sprinkler
Irrigation Systems in New Jersey.
U. S. Dept. of Agriculture, Soil Conservation
Service, State Office, Box 670, New Brun-
swick.

Ohio

Irrigation for Fruits and Vegetables in Ohio.^d
5 cents.
Agricultural Extension Service, Tazewend
Hall, Ohio State University, Columbus 10.

Oklahoma

Technical Bulletin No. T-57—Estimates of Con-
sumptive-Use and Irrigation Water Require-
ments of Crops in Oklahoma.
Circular 249—Irrigation in Oklahoma.
Circular 571—Surface Irrigation Development.
Circular 652—Sprinkler Irrigation in Oklahoma.
Circular 641—Irrigation Steps to Consider.
Extension Service, Oklahoma A. and M. Col-
lege, Stillwater.

South Carolina

Circular 327—Supplemental Irrigation for South
Carolina.
Extension Service, Clemson Agricultural Col-
lege, Clemson, S.C.

Tennessee

Design Handbook for Sprinkler Irrigation.
Sprinkler Irrigation Guide for Tennessee.
Agricultural Extension Service, University
of Tennessee, P. O. Box 1071, Knoxville 7.

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Fruit Grower*, Willoughby, Ohio. Fif-
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U. S. Dept. of Agriculture

Agricultural Handbook No. 82—Methods for
Evaluating Irrigation Systems.^b
Leaflet No. 342—Contour-Furrow Irrigation.^b
Leaflet No. 343—Corrugation Irrigation.^b
Leaflet No. 344—Furrow Irrigation.^b
Leaflet No. 371—Land Leveling for Irrigation.^b
Circular No. 969—Classification and Use of
Irrigation Waters.^b
Farmers' Bulletin No. 2044—Using Electricity
in Watering Farm Gardens.^b
Office of Information, United States Depart-
ment of Agriculture, Washington, D.C.
Circular 969—Classification and Use of Irriga-
tion Waters.^d 15 cents.
Superintendent of Documents, Government
Printing Office, Washington, D.C.

Utah

Bulletin No. 5—Measurement of Irrigation
Water.^b
FS No. 16—Easier Irrigation with Canvas and
Plastic Dams.^b
FS No. 22—Fall and Winter Irrigation.^b
FS No. 31—Measuring Irrigation Water.^b
Bulletin No. 133—Ground Water Supply in
Cache Valley, Utah.^b
Bulletin No. 166—Measurement of Irrigation
Water.^b
Extension Service, Utah State Agricultural
College, Logan.

Virginia

Irrigating Vegetables and Strawberries in Vir-
ginia.
A Review of Irrigation Studies in the Southeast.
Tentative Sprinkler Irrigation Guide for Coastal
Plain of Virginia.
Sprinkler Irrigation Guide for Piedmont Plateau
and Mountain Valleys of Virginia.
Summary of Irrigation Conference V.P.I.
Extension Service, Virginia Polytechnic In-
stitute, Blacksburg.

West Virginia

West Virginia Irrigation Guide for Sprinkler
Irrigation Design.^a
Agricultural Experiment Station, West Vir-
ginia University, Morgantown.

Wisconsin

Leaflet—Figuring Costs of Irrigation.
Extension Service, University of Wisconsin,
Madison 6.

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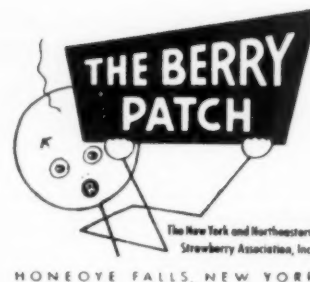
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Speaking of Strawberries . . .

HOW'S the efficiency rating of your strawberry irrigation program? Once we decided on strawberries as a career at the Berry Patch, we laid out the irrigation system right along with the first plants. It's paid off too.

A gentle one inch of water applied to the new beds as soon after setting as possible establishes the soil firmly around the root systems. Figuring to use irrigation as a *program*, not an emergency measure, we supplement natural rainfall with irrigation to the amount of one full inch of water a week, from Easter to Halloween.

Our latest wrinkle is the addition of a complete, water soluble plant food during the last 15 minutes of the weekly irrigation period up until Labor Day. This runs us about 100 pounds of Ra-Pid-Gro per acre per growing year, and saves us the fret and labor cost of applying fertilizers the old-fashioned way. Labor in an acre of strawberries is what costs the money. Yield of fine fruit brings the profit. We've found our periodic irrigation-fertilizing both cheap and profitable.

Irrigate Early

In the year of berry harvest, we get the irrigation going early. It would be nice to have enough equipment to cover the whole patch to ward off the frost on plants in full blossom, with continuous water through frosty nights. We don't happen to be that lucky, but warm, clear days with no wind usually means frost is threatened during the blossom stage. We actually saved a patch one year by soaking the sun-warmed soil all day, letting the resulting fog blanket the patch against the cold night. This was good for 30°—not guaranteed for anything lower, but you'd lose anyway if temperatures drop to 28°.

We avoid irrigating during the picking season. Too much water will promote soft fruit, botrytis rot, and other assorted agonies. Our program is to load the beds with all the water they'll take, from first blossom to first fruit color.—Robin W'ld.

AMERICAN FRUIT GROWER

TOPSY-TURVY DRAIN

**Drains soggy orchard in wet weather,
then irrigates it during a dry spell**

By CHARLES L. STRATTON

FRUIT grower Elmer Fitzgerald, of Leominster, Mass., is noted for his unusual solutions to common problems. His latest is a topsy-turvy drain that not only drains a wet area during the spring, but irrigates it during a dry spell.

A 10-acre block in a McIntosh orchard was too soggy, the trouble being that the water sank to an underlying hardpan and moved along underground. The local Soil Conservation Service was called in, and it was decided to run a pipeline down the hill to drain the area. The



Irrigation water flows from city hydrant at top of hill through hose line to nearby 14-foot well. Water flows through drainpipe in base of well into seven catchbasins located at intervals down the hillside. By blocking drainpipes in catchbasins one at a time, water flows into lateral perforated soil pipes which carry it to tree root zone.

results turned out as expected, and Fitzgerald picked a fine apple crop.

Then he got to thinking about the rows in the block still undrained. Naturally he wanted to do it at low cost. As he also had a hankering for an orchard irrigation system, he took his ideas up with the SCS.

Discussing the matter with technicians Richard Clarke and Gaylord Folley, it was decided to lay laterals out from the main line, using 4-inch perforated soil pipe (Orangeburg) in alternate rows. The seepage water would be intercepted by the laterals and carried into the main line for drainage downhill.

Uses City Water

To understand the irrigation end of it, we'll start at the beginning of the system at the top of the hill. Fortunately, Fitzgerald is located in an area where he can obtain an unlimited amount of city water at a reasonable rate. The city co-operated further with fire hydrants at the top of the hill. Near-by, a 14-foot well was dug and lined, a hose-

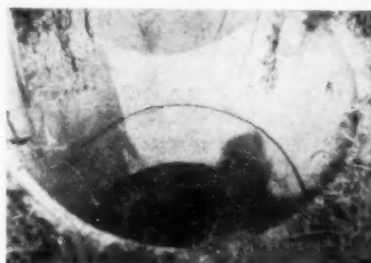
line extending from the hydrant to the well (a permanent pipe will follow later).

The water filling the well from the hydrant drains out through the drainpipe in the base and down the hill into seven catchbasins, located where each lateral intersects the main line.

The drain outlet in the catchbasin at the foot of the hill is plugged, and as the water flows in from the distant hydrant, the catchbasin is filled to a certain level, forcing the water out into the attached laterals. The next drainpipe in the catchbasin up the hill is plugged and the process is repeated, filling out another set of laterals. The water seeps out the perforated pipes into the ground and to the roots of the trees.

The drainpipe of each catchbasin, working up the hill, is plugged in turn and filled until all laterals are filled. Fitzgerald irrigates weekly during dry spells, using 3000 to 4000 gallons of water for a thorough job.

The entire system was laid out at an average depth of 3 feet. Technician Folley says, "Heavy equipment is liable to break pipe buried less than 2 feet deep."



Catchbasin filling up with water from well up-hill. When drain outlet is plugged during irrigation, catchbasin fills with water. The 30-inch cement catchbasins are set 5 feet deep. Each has removable cement lid. Cost to build: \$30.

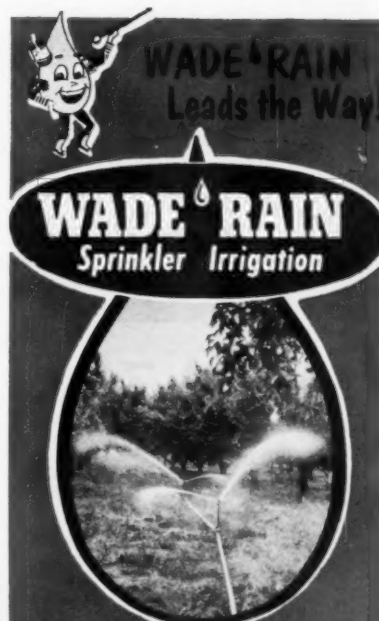
The laterals were laid on about 8 inches of gravel, perforations downward, then an additional 12 inches of gravel was added before filling in the trench. The gravel helps intercept the seepage of water. The laterals only, not the main line, are perforated.

A check station, consisting of an 8-inch clay pipe, was sunk at the end of each lateral. These come in mighty handy when irrigating to check on water level.

Costs were cut somewhat as Elmer Fitzgerald purchased a used trench digger, and mounting it on his tractor, did the digging between orchard jobs.

THE END.

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WADE RAIN Orchard Installations save hundreds of irrigating hours annually.

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WINDFALLS

It is said that Isaac Newton while sitting under an apple tree was struck on the head by a falling apple. Thus he conceived the great truth of his Law of Gravitation.



By HENRY BAILEY STEVENS

The End of a Chapter

SPRING came late to New England this year. Over on a north slope next to the pines there was still a small patch of brittle snow, unappetizing like old, discolored candy. But in the rest of the orchard the sod was coming green and the buds were swelling. If trees acquire habits, this would be the time when they might expect their annual feast of nitrogen.

"There isn't going to be any," I proclaimed rather defiantly. "Maybe you'll be just as well off. You won't produce as many apples, that's all."

I thought of my father who helped me to set this orchard 33 years ago. He was a better horticulturist than I shall ever be. He would have been disappointed in our failure to do a more thorough pruning job. The tops need to be cut back on many trees. There are bad gaps in some places, but in general the branches are too thick; they ought to be opened up more for sun and spray.

"Let's face it," I said. "We can't afford to put any more money into you. But don't feel frustrated about it. Call it a vacation. You'll be as free as the butternut trees down by the river. And I'm not sorry we planted you. You've meant a great deal in my life."

Not that "fruit growing is such fun," as our artist Don Wootton keeps suggesting. Of baffling engine breakdowns, tractor mirings, hail and hurricanes, personnel difficulties, harvest gluts, and labor shortages, we have had our share. To grow clean McIntosh is a constant test of organizing skill. And the succession of boys who have done the job have not lacked for challenge. Agnes and I paid the bills and did enough of the work to know

at least what commercial growers are up against; and for that we were grateful. We always believed that a full life demands a close relation to the world of growing plants. As the Chinese proverb has it:

*Unless my palm may press the soil,
Unless my hand may pull the weed,
Unless my brow is damp with toil,
The garden is not mine indeed.*

The crop has been an unusual one. It includes two books, several magazine articles and poems, this column, some practical education for a score of young men, pin money for hundreds of others, as well as the fruit itself. Children have liked to come here. In general these have been happy times.

But there were limits to this type of set-up. When the contractors for the new jet bomber base at the next village set a minimum wage of \$1.85 an hour, it became clear that the pace would be too much for us. We couldn't spend that kind of money.

Perhaps it is as well. Without her I had come anyway to the end of this experience. I want a change of scene, and with my professional retirement at the University of New Hampshire in June, I plan to fulfill a long-felt hope to understand something of other types of orchards throughout the country. That will require more than seeing them. I shall take some old clothes along, and hope to do a little work.

I'll come back later. There's still a little more planting I'd like to do on this soil. There's a grandson toddling around the house.

Nuts Meet Acid Test BILLY PEAVY, of Hollywood, Calif., sends this testimony on the protein value of nuts: "My wife hasn't eaten meat for three years and I have not for seven (except

AMERICAN FRUIT GROWER

on rare occasions), substituting instead nuts. We are in excellent health, have plenty of energy and appear in good condition to people who know us.

"I have done lots of research on the protein problem and have found that eight amino acids are essential for the health of young adult men; that 10 amino acids are essential for the young or aged; that all 10 of these are present in the tree nuts and peanuts. We find that a 3- to 4-ounce serving of shelled almonds or pecans along with some fruit or salad makes a very satisfying meal and gives all the protein we need."

An Orchard Homestead

By Emma Martin
(of Ephrata, Pa.)

In springtime the trees form flowering domes

To bring sweet fragrance to birds' homes. Amid the branches they built their nests. They came for the season to be our guests.

Daily, chirping and singing, they seem to say:

"We'll make your toils lighter, your cares all away."

Then soon comes the harvest with fruit juicy red.

Oh, give me the life of an Orchard Homestead.

Finds Early Fruits Best to Plant

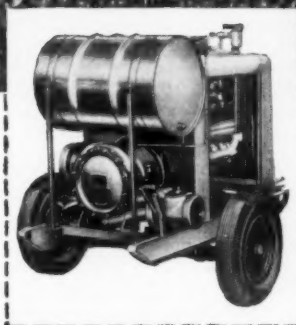
"WHEN we came to Vermont five years ago, my first yearnings horticulturally were to plant fruit trees," writes Mrs. Daniel T. O'Connell, of South Londonderry. "As there are several commercial orchards in the vicinity that could provide us with good varieties of winter apples at less cost than we could grow them, we planted the ones which would ripen early in the summer and which would beat the autumn frosts that can be severe at our altitude of a thousand feet. We selected apples, plums, pears, and sour cherries from the New York State Fruit Testing Co-operative Association, at Geneva, and last summer we began to enjoy the fruits of our labor.

"We can recommend highly the apples that cheered us from the first of August—Close, Alton, Melba, Dunning, Greendale. In early fall we had Early McIntosh, Milton, and Ogden. By late fall we could get our winter supply of McIntosh, Cortland, and Spy from a commercial orchard where they are grown to perfection. Of course we enjoyed our other tree fruits too, but our big thrill was eating summer apples we could not buy at any price."

Address your "Windfalls" contributions to Henry Bailey Stevens, AMERICAN FRUIT GROWER, Willoughby, Ohio.

JUNE, 1956

Normal rainfall is NOT enough!



IRRIGATE and PROSPER with a dependable GORMAN-RUPP PUMP

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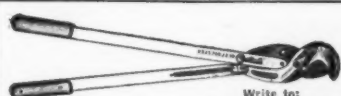
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JOHN C. BACON CORP., GASPORT, N.Y.

FREE BOOK of

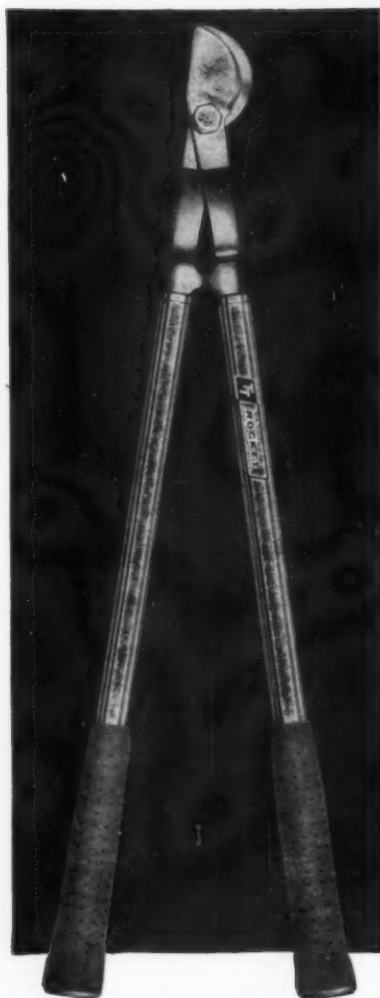
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NURSERIES
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Dansville, N.Y.

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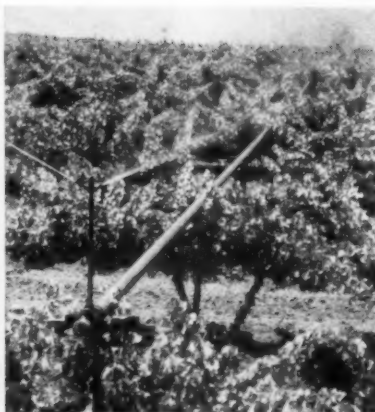
Lightweight tubular steel handles. Won't bend or break. Cushion grips absorb shock, won't slip when wet or in gloved hand. Finest cutlery steel blade. Perfect balance reduces fatigue.

Pictured is the No. A105 heavy-duty citrus lopper with drop-hook action. See it at your hardware or garden supply store. Also look for No. A103 ROCKET lopper plus True Temper's full line of wood-handled loppers, pruners and shears. True Temper Corp., Cleveland 15, Ohio.

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NO STOOPING

The Cella Vineyards near Snelling, Calif., have a tested and proved idea for sprinkling. Irrigation pipes are placed on top of grape trellises. Wooden blocks placed on top of the regular posts form rough cradles to hold the pipe. Little bracing is needed since there is no strain other than the direct weight of water-filled pipes. A crew of four or five men can quickly change the setting by each man picking up a section of pipe and carrying it down the row without disconnecting it. Leroy Anderson, manager of the farm, is using this system on wine grapes trained to wires. The idea is particularly adaptable to the Thompson Seedless variety.—Raymond Coppock.

STATE NEWS

(Continued from page 15)

bear sizable crops and irrigated during one serious frost period. Although Delicious trees adjoining these rows and in other blocks were a complete loss, he had a fine crop on the three irrigated rows. He used low, under-tree sprinklers because of a previous experience in which he lost the fruit on limbs where the water froze as it fell, while above the sprinkler line he saved the fruit.

Henry Levy, at Brownsville, installed irrigation last year and had enough pipe to cover his 6 acres of strawberries at one setting. He had a heavy bloom on April 5, despite several killing frosts the previous week. These blooms meant prime berries for early-May shipment.

Ervin Fly, fruit grower and broker at Milan, now has several hundred acres of berries in his area under irrigation. He considers irrigation "almost a must" to produce a good crop of strawberries, but frost protection makes it "a gilt-edged investment."

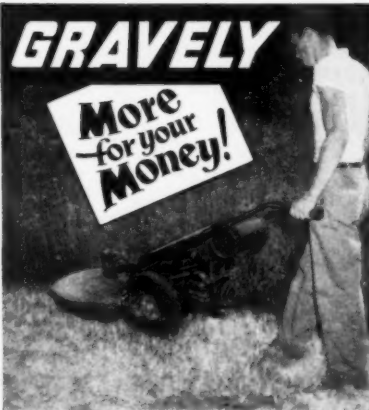
Thomas M. Scott, of Taft, died recently, at the age of 78. A member of the Tennessee State Horticultural Society for 29 years, he was one of the state's most progressive growers. His sons, Roy and Grady, carry on.—A. N. Pratt, Sec'y, Nashville.

Strawberry Crop

KENTUCKY—The April freeze took 5 to 8% of the strawberry blossoms, but left a good crop in prospect. As of May 2, prospects are also good for the apple and peach crops.—W. W. Magill, Sec'y, Lexington.

Crops Weather Light Frosts

ARKANSAS—Fruit crops came through a series of light April freezes without serious damage to tree fruits and with only minor damage to strawberries. Adequate moisture during the remainder of the year should result in normal or better-than-normal yields of peaches, apples, and grapes. The strawberry crop now being



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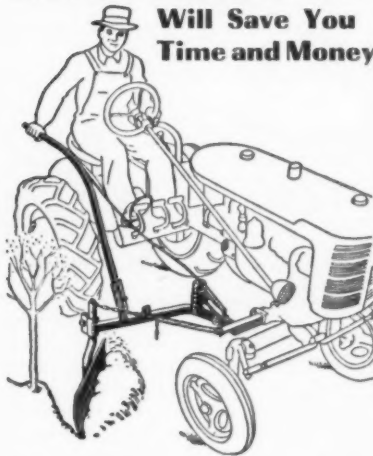
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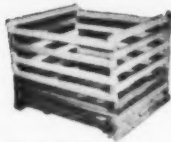
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harvested is yielding well, although total acreage is still below the pre-drought figures.—*Earl J. Allen, Sec'y, Fayetteville.***Season Is Late****NEW JERSEY**—Cool temperatures and several snow falls in April delayed fruit development. Snow fell as late as April 23 in southern New Jersey.Peaches were in full bloom May 1, with heavy bloom on nearly all varieties. As of May 3, apple bloom is medium to heavy on all varieties, and blueberry bloom is heavy. There was no blueberry or strawberry bloom during April, but crop prospects appeared promising on May 1. Strawberry harvest will be late, with no berries in May.—*Ernest G. Christ, Sec'y, New Brunswick.***Forecast Peach Crop****PENNSYLVANIA**—Peach growers expect to harvest a crop of 2,500,000 bushels this year, leading producers reported April 18 to the Fruit Industries Committee of the Pennsylvania State Horticultural Association. This would be a quarter-million bushels above 1955 and about the same as for 1954, said John E. Linde, Orefield, committee chairman.

Growers indicated that a greater variety and volume of early peaches than ever



Discussing 1956 peach prospects in Pennsylvania are (left to right): John U. Ruef, State College, secretary of the Pennsylvania State Horticultural Association; John E. Linde, Orefield, chairman of the Fruit Industries Committee, and Harry A. Peters, Scotland, president of the association.

before will start moving to market about August 1—enough to keep local needs supplied until the big Elberta crop matures in late August and early September.—*N. M. Eberly, Agr'l Editor, University Park.***Late Spring****VERMONT**—A very late spring has delayed blossom bud development. The spray season is consequently later than normal. Blossom buds are light on all varieties in most Champlain Valley orchards, compared to last year's buds.—*C. L. Calahan, Sec'y, Burlington.***Bark Loosening****MASSACHUSETTS**—Considerable trunk and scaffold limb bark loosening on McIntosh trees has been reported in some localities. The season is at least two weeks late. Bloom prospects are generally better than anticipated after the heavy 1955 crop.—*Dr. A. P. French, Sec'y, Amherst.***Losses May be Heavy****IOWA**—April brought cold temperatures to the state. In the last week of April temperatures dropped to 9° F. in southwestern Iowa, and 16° to 22° F. in southeastern Iowa. Northwestern Iowa had 5 to 7 inches of snowfall.

(Continued on page 35)

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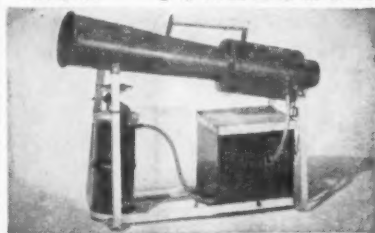
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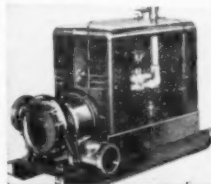
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Work Saver



A new drain collar answers all grower needs. Simple construction means trouble-free service and through its use laterals are easily and quickly moved to new locations. The new collar is easily installed and can be operated by a child. Why not incorporate this time saver in your system. Write Birger Engstrom, McDowell Mfg. Co., 301 Stanton Ave., Pittsburgh 9, Pa., for full details.

Grower-Designed



When you find a piece of equipment built by a grower you can be sure it will meet the most exacting conditions. Grower Dickerson in South Haven, Mich., has said: "Blueberry foliage is susceptible to fertilizer burn as are most berry plants. By using the sideshields on the Skibbe spreader, the fertilizer was well directed under the plant foliage. Not one of my

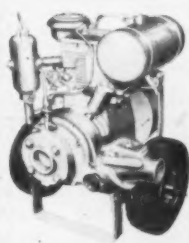
AMERICAN FRUIT GROWER

• New Line of Pumps
• Irrigation Equipment

plants was injured." I suggest that you write fruit grower Harold Skibbe, Skibbe Manufacturing Co., Sodus, Mich.

Myers Irrigation Pumps

One of the oldest and most respected pump manufacturers in the country has entered the irrigation field. Their new line of pumps is carefully designed to give the grower maximum service at low cost. The new line includes pumps ranging from 100 to 1800 gallons a minute with pressures from 60 to 200 pounds. Known as "Pressure Rain" centrifugal pumps, they are fully equipped with grower-wanted safety features. Write Dick Topper, Myers Pump Co., 8206 Orange St., Ashland, Ohio.



Irrigation Carrier



Several peach growers in North Carolina asked a well-known manufacturer there to make an easy-to-use hand grip with which they could move their lateral irrigation sections from row to row. The inexpensive carrier proved so useful and successful that the company is making it available to other growers all over the country. Write to Mr. Kellam, Kellam Manufacturing Co., Biscoe, N.C.

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Many fruit growers have wanted aluminum pipe which would handle low pressure as well as high pressure installations. This new pipe does both jobs equally well. Couplers are likewise versatile and built ruggedly. If you are looking for a double duty, proven pipe, why not write Ed Yeasell, W. R. Ames Co., 150 Hooper St., San Francisco 7, Calif.



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Strawberry Growers

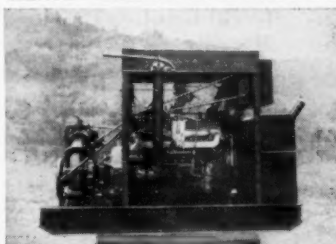
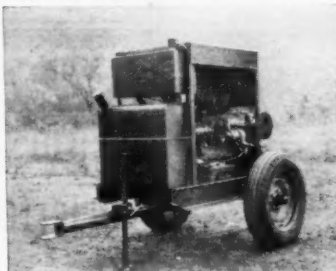
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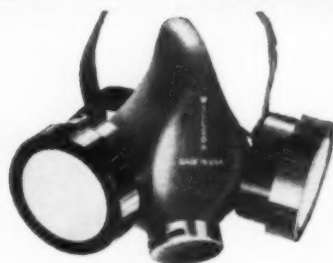
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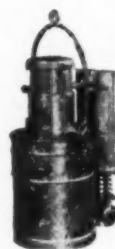
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NEW BERRIES

THREE new berries are arousing the excitement of Pacific Northwest growers. A new strawberry, Puget Beauty, and a new red raspberry, Sumner, were released this spring by Washington State College, while a new blackberry, now known as Number 928, is being readied for release by Oregon State College and the USDA.

The two Washington introductions were originated by Dr. C. D. Schwartze and Arthur S. Myrhe at the Western Washington Experiment Station, Puyallup.

Puget Beauty shows greatest promise on heavy-textured, poorly drained soils, because it is resistant to red stele disease present in such soils. However, the Northwest variety is still best for growers whose soil is free of red stele.

Puget Beauty berries are large, glossy, light crimson, and usually cone-shaped. They have large, medium-green hulls and small yellow seeds. Light, bright red flesh has medium texture and a sweet, aromatic flavor. Frozen samples from an upland test plot rated very high.

Puget Beauty appears to be less subject to winter freeze damage than Northwest. It also has a stronger root system, so should be better adapted to nonirrigated soils.

Sumner grows well in soils too heavy for most raspberry varieties. The new variety is winter hardy in western Washington.

Berries are larger than those of Washington, but not so large as Puyallup. They are slightly darker red than the other two varieties, and are attractive and of good quality. Sumner made a good showing in canning and freezing tests.

Plants of these two new varieties are being distributed under the supervision of the Washington State Crop Improvement Association. Only commercial growers in Washington will be eligible for plants this year.

Oregon's new blackberry, Number 928, was developed by George Waldo, USDA horticulturist at Corvallis. It is a cross between the Chehalem and the Olallie varieties. It will be ready for distribution next year.

It has very good flavor, firmness, and color. In frozen pack quality tests, it has rated consistently higher than the Boysen blackberry. It has also rated high for pies and ice cream. Seed size is small.

Yield tests show the new berry to be a top performer, giving up to 7 tons per acre.

THE END.

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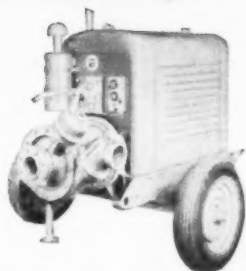
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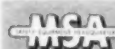


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STATE NEWS

(Continued from page 31)

Reports from southern Iowa growers indicate that the loss may be heavy to early-flowering fruits such as apples, peaches, cherries, and strawberries in bloom. After a heavy apple crop last year, growers are looking forward to a light crop this year.

The 14-year-old son of J. J. Brown, fruit grower at West Des Moines, died in a recent auto accident. The other members of the family, all in the car, were hospitalized, some in serious condition.—R. Glenn Raines, Sec'y, Des Moines.

Freeze Damage Spotty

INDIANA—Frost damage to peaches and apples depends on location. In some sections damage has been severe, in others very

QUICK ESTIMATOR HOME CANNING PEACHES

PEACHES BUSHEL	QTS. BU.	PEACH COST PER QT.	SYRUP PER QT.	JAR COST	COST PER QT. PEACHES HOME CANNED
.00	20	0¢	3¢	3¢	6¢
1.00	"	5	"	"	11
1.25	"	6½	"	"	12¼
1.50	"	7½	"	"	13½
1.75	"	8½	"	"	14¾
2.00	20	10¢	"	"	16¢
2.25	"	11½	"	"	17¼
2.50	"	12½	"	"	18½
2.75	"	13½	"	"	19¾
3.00	20	15¢	"	"	21¢
3.25	"	16½	"	"	22¼
3.50	"	17½	"	"	23½
3.75	"	18½	"	"	24¾
4.00	20	20¢	"	"	26¢

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AMERICAN FRUIT GROWER
Willoughby, Ohio

light. The over-all crop picture has not been materially affected as of May 4.

John D. Smith, owner of the Beechwood Orchards and a life member of the Indiana Horticultural Society, died April 14. He was 62. Dr. W. F. Hughes, of Spencer, ophthalmologist and fruit grower, died April 19 at the age of 85.—George Adrian, Sec'y, Indianapolis.

Cold Damage to Fruit

ILLINOIS—Fruit growers throughout the state have reported varying degrees of damage from the cold temperatures of April 23. Worst-damaged appears to be the area along the Mississippi River from St. Clair County northward to Quincy.

W. B. Williams, well-known Danville fruit grower, died April 12 at his home. He was a member of the Illinois Fruit Council and the Illinois State Horticultural Society.—Harold J. Hartley, Sec'y, Carbondale.

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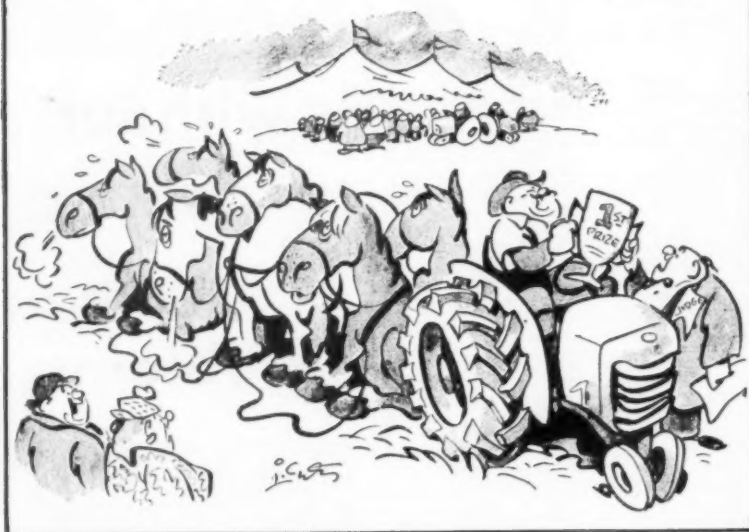
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Maine State Pomological Society field meetings: June 5—New Gloucester; June 6—Monmouth; June 7—Madison. F. J. McDonald, Sec'y, Monmouth.

June 11-13—National Apple Institute annual meeting, Dennis Hotel, Atlantic City, N. J.—Truman Nold, Exec. Sec'y, 726 Jackson Place N. W., Washington, D. C.

June 14—Ohio Agricultural Experiment Station Small Fruits Day, Wooster.—C. W. Ellenwood, Sec'y, Wooster.

June 14-16—Idaho Grower-Shippers Association, Inc., annual summer convention, Sun Valley.—Edd Moore, Sec'y, P.O. Box 1100, Idaho Falls.

Oklahoma A. & M. College Horticulture Field Days: June 14—Bixby; June 28—Idabel; July 12—Stillwell.—Fred LeCone, Dept. of Horticulture, Stillwater.

June 18—Rhode Island Fruit Growers Association twilight meeting, Ellery Christiansen Orchards, North Smithfield.—John E. Wiggins, Sec'y, R.F.D., Chepachet.

June 18—Annual strawberry twilight meeting, University of Massachusetts, Amherst.—A. P. French, Sec'y, Amherst.

June 27—Fourth Annual Summer Orchard Day, Lester R. Stone farm, E. Moline, Ill.—Harold J. Hartley, Sec'y, Carbondale.

June 27-29—South Dakota State Horticultural Society meeting with S.D. Federation of Garden Clubs, Brookings.—W. A. Simmons, Sec'y, Sioux Falls.

Indiana Horticultural Society summer meetings: Apple Day—July 11, Purdue MFA Farm, Bedford, Ind.;—July 12, Frank Street's Cardinal Farm, Henderson, Ky.—George Adrian, Sec'y, R. R. 4, Box 54-M, Indianapolis.

July 19—Massachusetts Fruit Growers Association orchard day and summer meeting, University of Massachusetts.—A. P. French, Sec'y, Amherst.

Aug. 13-15—International Apple Association 62nd annual convention, Dinkler Plaza Hotel, Atlanta, Ga.—Fred W. Burrows, Exec. Vice-Pres., 1302 18th St. N.W., Washington 6, D.C.

Aug. 14-15—Ohio Pesticide Institute annual meeting, Ohio Agricultural Experiment Station, Wooster.—J. D. Wilson, Sec'y, Wooster.

Aug. 16—Thirty-fourth annual Orchard Day, Ohio Experiment Station, Wooster.—C. W. Ellenwood, Sec'y, Wooster.

Aug. 16-25—Annual Pennsylvania Peach Week. Peach queen will be selected Aug. 18 at York.

Sept. 23-26—Produce Packaging Association, Inc., Conference and Exposition, Hotel Fontainebleau, Miami Beach, Fla.—Association headquarters: 500 Fifth Ave., New York 36, N.Y.

Sept. 27-29—Florida Fruit and Vegetable Association annual convention, Hotel Fontainebleau, Miami Beach.—Assn. Headquarters: 4401 E. Colonial Dr., Orlando.

Oct. 8-10—Texas Citrus and Vegetable Growers and Shippers 14th annual convention, Plaza Hotel, San Antonio.—E. Anson, Exec. Mgr., 306 E. Jackson, Harlingen.

Oct. 25-Nov. 3—National Apple Week.—Norbert Bachmeyer, Sec'y, 1302 18th St. N.W., Washington 6, D.C.

Nov. 1-2—Western Growers Association annual convention, Sheraton-Palace Hotel, San Francisco, Calif.—Headquarters, 606 S. Hill St., Los Angeles 14.

Nov. 26-28—Illinois State Horticultural Society and Illinois Fruit Council annual meeting, Abraham Lincoln Hotel, Springfield.—Harold J. Hartley, Sec'y, Carbondale.

Dec. 14-15—Western Colorado Horticultural Society annual meeting, Mesa College, Grand Junction.—Raleigh B. Flanders, Sec'y, Box 478, Grand Junction.

Jan. 14-16, 1957—Virginia State Horticultural Society 61st annual meeting.—John Watson, Sec'y, P. O. Box 718, Staunton.

New York State Horticultural Society winter meetings: Jan. 23-25—Rochester; Jan. 30-Feb. 1—Kingston.—Daniel M. Dalrymple, Sec'y, Lockport.

Jan. 28-31—United Fresh Fruit & Vegetable Association, Benjamin Franklin Hotel, Philadelphia.—Association headquarters: 777 14th St., N.W., Washington, D.C.

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American Fruit Grower

RICHARD T. MEISTER, Editor
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• Fruit for Health •

Ten Thousand Growers . . . One Remedy

MANY meetings tend to become cold, historical facts in a few short years. But we predict that eastern apple growers will remember for a long time a recent meeting held in Pittsburgh, Pa.

Nineteen fruit growers representing the diverse segments of the eastern apple industry came together in Pittsburgh February 24 to talk business. They were looking for a better way to market their apples; a way that would prevent disastrous market gluts and return a fair profit to each and every grower.

The following recommendations were passed by this Eastern Apple Growers' Marketing Conference:

- 1) Provide sales stocks large enough to deal with today's big-volume buyers.
- 2) Provide sufficient storage facilities for these large stocks.
- 3) Provide skilled salesmen to deal with today's professional buyers.
- 4) Provide the salesman with uniformity of the pack he sells.
- 5) Growers should get themselves in position to bargain with processors.

In short, they laid the cornerstone for a marketing association of eastern apple growers that will return more profits to each member-grower than he could ever get by working alone.

A grower marketing alone takes the buyer's price for his apples. Ten thousand eastern apple growers marketing together will be able to control the marketing situation to a degree that has never before been possible. This is the "dollars-and-cents" significance of the Pittsburgh meeting.

A Horticulturist Abroad

OUT of New York just ahead of another unusual April snowstorm, after an informative evening with Dr. Ernest Hart, close friend and vice-president of the Food Machinery and Chemical Corporation, to awake in Ireland for breakfast.

Over lovely England by day with only 7500 feet of cool, thin air separating us from the Long Ashton Research Station and Director T. Wallace. To the north lives fruit grower C. P. Norbury at Malvern. To the left as the plane turns for Paris is fruit grower Tom Neame, the East Malling Research Station, and Director F. R. Tubbs. Over the English channel, eating wonderful fresh Passe Crassane pears and Delicious apples, to land in Paris by afternoon for a telephone conversation with fruit grower Andre Reifenburg.

Again aloft, over Geneva, Switzerland, where last summer we attended the First International Conference on the Peacetime Use of Atomic Energy—Mont Blanc on the left—the Riviera, Monte Carlo and an impending wedding—Elba where Napoleon was held, and so into Rome for a restful night to dream of how small the world has become, of how fast the ideas of one place travel to another, and of how similar are the ambitions and hopes of men, ever adjusting to their resources and their environment.

American canned goods on the shelves of Rome stores—some all the way from California. Home-grown Abundanza, Anoka, York, and Delicious apples—interesting how American varieties have succeeded in parts of Europe, thus returning the favor of European varieties like the Bartlett pear and the Napoleon and Montmorency cherries which have found a new home in America. A sudden turn in the evening walk abruptly ends at the Fountain of Trevi, and a coin or two is tossed for all the good friends back home. A pause the next day at the Roman Forum and the gigantic Colosseum of 2000 years ago, desolate but for tourists and the plants which always take over when man is through.

Once more in the air, down the boot

of Italy with the mountains entirely covered with fresh white snow from the previous night's unseasonable fall—"never such weather here before"—oleanders nipped, olives and citrus hurt, real hardship in Spain and southern Italy. The great fruit area around Ferrara to the north is reported untouched. Vesuvius and Naples are on the right, and then out over the Adriatic Sea toward Greece.

Again the snow-clad mountains appear, and one is impressed by the ruggedness and the erosion of this old land. A stop at Athens includes the Acropolis where nearly 2500 years ago Pericles surveyed the Golden Age, and where from nearby Mars Hill, Paul preached to the Athenians.

The United States grass-roots aid program has helped increase the food supply of Greece from an index of 100 in 1949 to 167 in 1955. There are now 400 county agents and 125 home demonstration agents. Maybe not so spectacular as some programs, this sort of thing is really effective in the long run. An unexpected interview at the palace with King Philip and Queen

Fredericka is a wonderful association with two talented and dedicated leaders of a friendly nation.

A seedling of Delicious is said to be widely planted and much like the parent. Citrus is excellent. Some cold storage is available. The people prefer fresh produce. With production up, the new program has already shifted to improved marketing and distribution.

Across the Mediterranean by night to land in Cairo, Egypt at dawn to gaze in awe upon the pyramids, to stand spell-bound before the culture and the art of "King Tut's" age, and to clasp the hand of Dr. Fouad Amin, a former student.

Off from Egypt over Iraq and a quick stop at Abadan, the largest oil refinery in the world, where a city of 200,000 has been built from nothing. Here Darius and Cyrus once ruled over a great empire, from which many of our common horticultural crop plants originated. What went wrong? All is now an appalling desert—thirsty, torrid, terrible, stretching for miles and miles and miles. Was it denuding of the land by overgrazing as Henry Bailey Stevens suggests? Has the climate changed? Temperatures in the summer are 135° F. on the airport runways.

Down the Persian Gulf with a stop at hot, burning Dahrhan in Saudi Arabia for refueling, and then the jump across the water to the subcontinent of India and a stop at Karachi, the new capital of Pakistan. Now come mangoes, papayas, loquats, oranges, grapefruit, bananas, and a variety of other fruits, mostly put up in nature's sanitary packages and very acceptable to the food-conscious, disease-susceptible foreign visitors.

Temperatures every day are now 103 to 107, with dryness reported at the unbelievable 3 per cent. Water is the life of the world. In the Punjab of West Pakistan are 25 to 27 millions of acres under irrigation—the largest irrigation project in the world. Waterlogging and salinity problems are serious. A team from Washington State College, headed by Dr. Alfred Shaw, has done wonders here. With production of grain crops being increased during the last five years, the turn is now toward fruits and vegetables. Processing is badly needed.

Delhi, India, is separated from Karachi in West Pakistan by 600 miles of fluttery air travel over mostly desert waste and annoying air currents. At New Delhi are former students Dr. J. P. Singh, S. L. Katyal, and Dr. G. S. Randhawa at the airport with welcoming garlands of flowers. It is like seeing the home folks once again—student ties are like that. Here too, the new program is for more fruits and vegetables. There is to be a Department of Horticulture. Yes, horticulture is the same the world around, the people are the same. Why can we not live in peace with one another? Perhaps the "Atoms for Peace" program on which we are embarked will help.

—H.B.T.

Our associate editor, Dr. H. B. Tukey, of Michigan State University, is one of a team of U. S. scientists now surveying 14 Asian countries for the U. S. Government in connection with the establishment of a Nuclear Research Center in Asia by the United States. His travel takes him around the world. This is the first report from him to AMERICAN FRUIT GROWER readers.

Coming Next Month

- Buyer's Guide for the Fruit Farm.
- New Ideas in Labor and Time Savers.
- A Living Museum of Old Apple Varieties.
- Summer Transparents Extend Apple Season for Hudson Valley Grower.



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Long residual saves you costs of additional sprays. Aramite is easily applied, compatible with sulphur and many other insecticides and fungicides. Aramite does not kill natural predators.

For more than 19 fruit and vegetable non-fodder crops, including apples, the Miller Amendment (Public Law 518) has approved Aramite with a tolerance established of one part in a million.

**Order your Aramite supply from your local supplier;
write, phone or call us if he is unable to deliver.**



United States Rubber

Naugatuck Chemical Division

Naugatuck, Connecticut

producers of seed protectants, fungicides, miticides, insecticides, growth retardants, herbicides: Spergon, Phygon, Aramite, Synklor, MH, Alanap, Duraset.



Use either



or



Simplify your spraying program by using *one* of these Black Leaf cover sprays. You'll stop the bugs, save work, and get your biggest clean fruit total.

In Black Leaf 253, an exclusive process impregnates each particle of the tobacco base with both DDT and Parathion. There's no mixing problem for you. Just dump Black Leaf 253 in the water as the spray tank fills.

Black Leaf 258 combines DDT and Malathion by the same process. Again, no mixing. Only Black

Leaf offers you these timesaving formulations.

Either of these dustless compounds controls codling moth, orchard mites, red-banded leaf roller, European red mites, grape berry moth, and similar insects attacking fruit.

You get long-lasting insect protection with practically no visible residue. You get high-profit finish and color. Ask your dealer for either Black Leaf 253 or Black Leaf 258—in 2½-pound bags, or 50-pound drums.



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